Trains

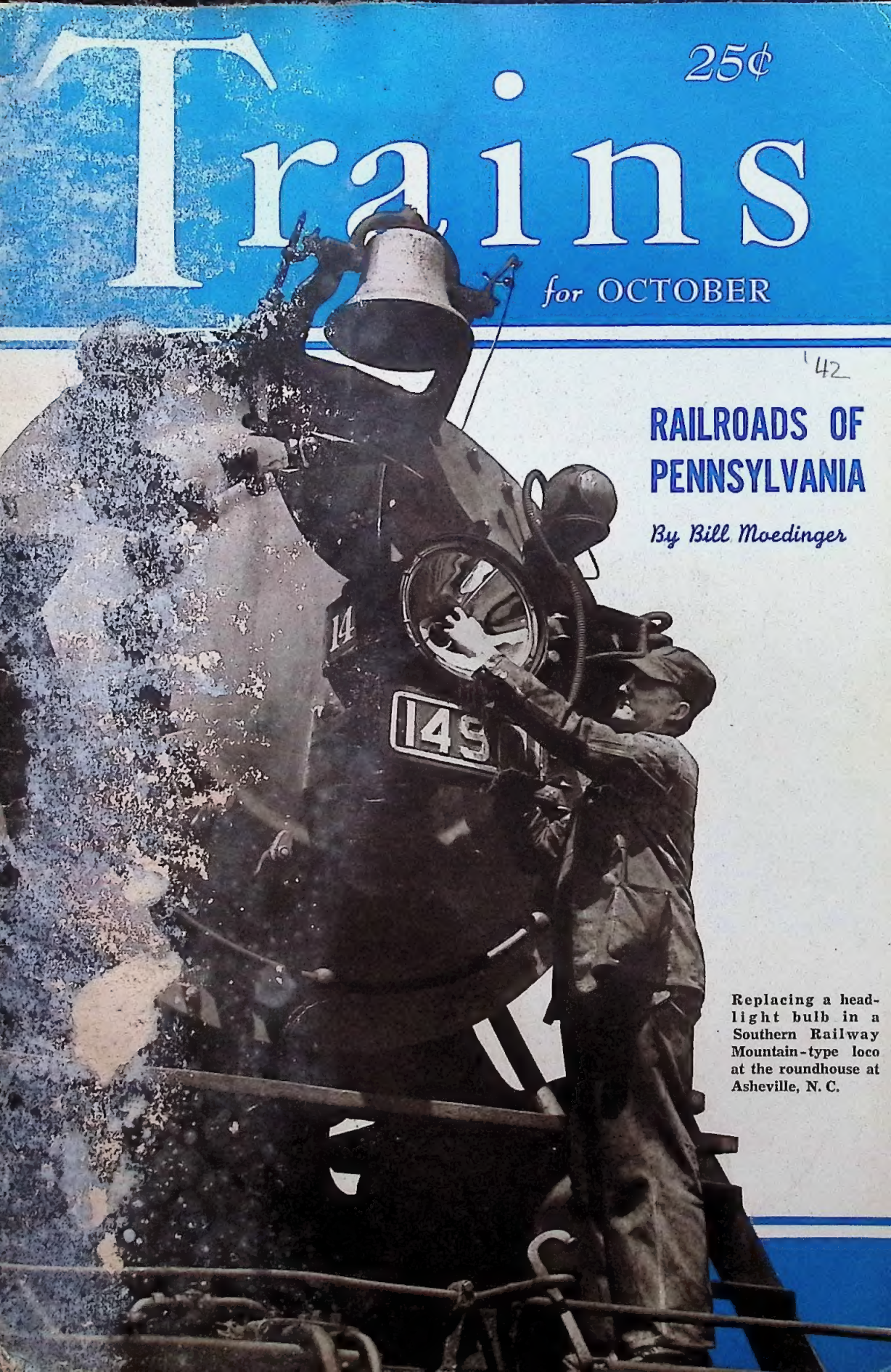
25¢

for OCTOBER

'42

RAILROADS OF PENNSYLVANIA

By Bill Moedinger



Replacing a headlight bulb in a Southern Railway Mountain-type loco at the roundhouse at Asheville, N. C.

W. F. Postles, 2223 N. E. 43rd Ave., Portland, Ore.

Framed by a concrete culvert pipe.

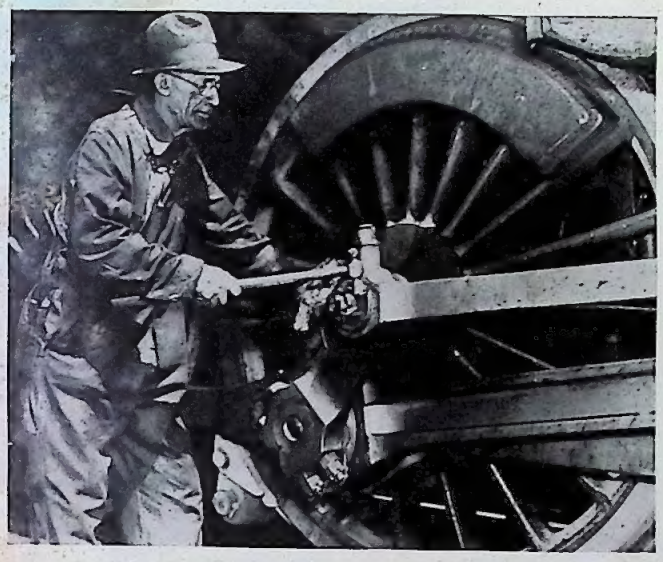
While waiting for a train photo W. F. Postles climbed into a piece of concrete culvert pipe to get out of a sudden shower. That gave him the idea for this unusual shot of a Northern Pacific train to Seattle just outside of Portland. Northern Pacific, Great Northern, and Union Pacific all run between Seattle and Portland, which are 183 miles apart. The services are, however, pooled. Timetables of all three lines show all the trains, without distinction, and tickets on any line are also good on trains of the other two. Fact is, until he sees the equipment, the passenger doesn't know which is which. Fastest time, four hours, is made by Nos 405 and 406, which run every sixth day to meet the *City of Portland*.

Wayside

There is nothing like war to prove the indispensability of railroad transportation. Notice it always the railway junctions for which armies head. Notice it is the railroads which carry anything and everything in all kinds of weather, and the railroads on which industry and government lean to carry the load—even the portion of the load which in peacetime was for one reason or another carried by other modes of transport. Fact is, the railroads accept and carry every kind of freight, but you never see trucks carrying the heavy bulk freight, you seldom see boats carrying package freight and express, and even in your fondest dreams the airplanes do not hope to ever compete with the *average* rail freight rate of less than one cent per ton-mile. The engines of a plane must not only move it, but keep it aloft, at a cost tremendously in excess of any land vehicle. Truly, the war proves the important place of railroad transportation.

At the close of an article on "How to Reduce Station Delays to Passenger Trains," *Railway Age* remarks, "If it is impossible to secure satisfactory performance on a given train, after considering it from all of the foregoing angles, there is no other alternative but to revise the schedule to meet the conditions, for experience has definitely proved that a dishonest schedule is one of the deepest sources of resentment of the American traveling public." Amen!

A. C. K.



Trains

Editors: A. C. Kalmbach, Linn H. Westcott, Willard V. Anderson

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Masthead photo, by Frank Clodfelter, Asheville, N. C., shows Engine Inspector A. J. Bean tapping on a Southern Railway engine.

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Independent Division, Eighth Avenue express northbound beyond Columbus Circle. Courtesy New York City Transit System.

Subway Jackpot

Editor of TRAINS:

THREE thousand six hundred passengers a minute, 24 hours a day, seven days a week, are carried on a 245-mile railroad. That is the story of the most amazing of all city-owned railroads—the New York City Transit System, a must-see for the city's visitors, one of Fred Allen's most popular radio subjects, and just the "subway" to New Yorkers.

Three distinct railroads were merged two years ago to make up the present city-owned system. Here is an outline of (1) the construction and (2) the operation of its three divisions: Interboro (IRT Division), Brooklyn-Manhattan (BMT Division), and Independent (IND Division).

Construction.

Capital investment: $1,500,000,000 (all three divisions).

Oldest trackage still in operation: City Hall to Broadway and 145th Street via Fourth Avenue and 42nd Street. Opened October 24, 1904 (IRT Division). [BMT Division on Fourth Avenue, Brooklyn, opened 1907 and 1908; IND Division on Eighth Avenue, Manhattan, opened 1932.]

Oldest trackage (now dismantled): Sixth Avenue (elevated), opened 1878. Steam power used until 1903. Removed in 1939. (IRT Division). [IRT Division also removed els on Ninth Avenue and Second Avenue, Manhattan; BMT Division also removed els on Fulton Street and Fifth Avenue, Brooklyn.]

Newest trackage in operation: Eighth Street to 53rd Street via Sixth Avenue, opened December 15, 1940. Cost, $60,000,000. 2½ route miles at $24,000,000 per mile. 5 stations (IND Division).

Present construction: Rockaway Avenue to Drew Street via Fulton Street and Pitkin Avenue, Brooklyn. Opens 1943, war permitting. Cost, $47,000,000. 3.4 route miles. 6 stations (IND Division).

Proposed post-war construction: 107 route miles (86 miles underground), 196 stations (159 underground). Cost, $980,000,000 estimated in 1939 (all three divisions).

Present route mileage: 245.6 miles (of which 133 are underground, composed of approximately 43 miles double track, 11 miles three tracks, and 79 miles four tracks).

Rail base, highest and lowest track: elevation +161 feet in 175th Street Station, Manhattan (IND Division); elevation —113 feet in 60th Street tunnel between Manhattan and Queens (BMT Division.)

Tunnel types: (1) Cut-and-cover (square cross-section) most popular. Minimum headroom from rail base is 13′-2″. Minimum width on straight track is 13′-6″. (2) Pressure tunneling (round cross-section), only for sand and under water. Diameter 18 feet at outside edge of tube.

Road: Maximum grade, 4 per cent; usual, 3 per cent. Maximum curve, 500-foot radius; usual, 2500-foot radius. Rails are 100-pound per yard, 100 feet long. Ballast track (on Independent Division) only at switches and crossovers. Cement-imbedded ties 6″ x 10″ x 30″, allowing 30″ safety and drainage ditch between rails. Crossings at grade largely eliminated by flexing of tracks on the newer lines. Three-color automatic block system signals throughout the entire system combined with automatic trip. All switching handled by interlocking machines and model boards. Construction time is three to five years per section.

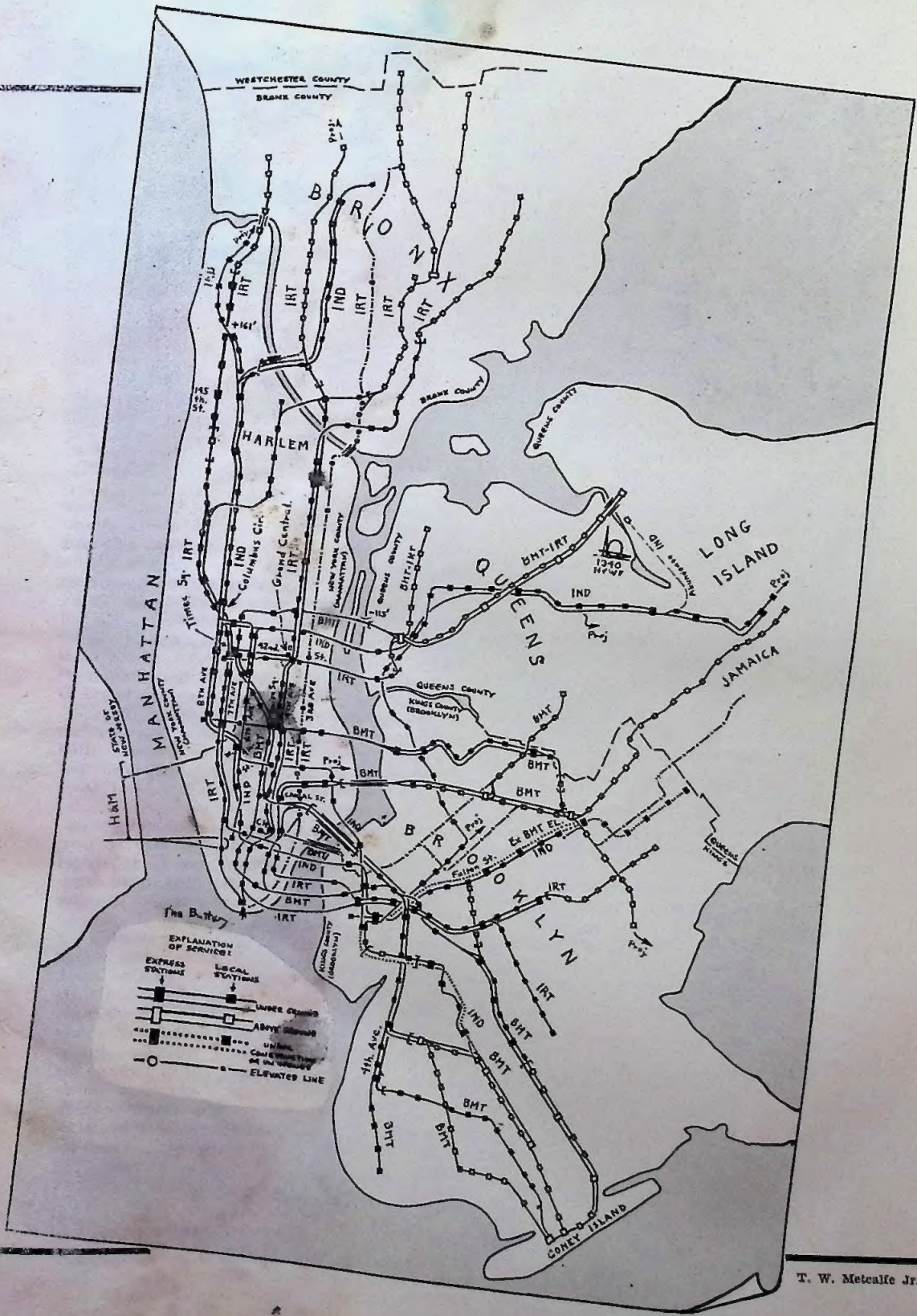
Largest Stations.

Underground, Manhattan:

Times Square (IRT and BMT Div.)
13 tracks, 4 levels, 8 platforms

Canal Street (IRT and BMT Div.)
12 tracks, 4 levels, 8 platforms

Union Square (IRT and BMT Div.)
10 tracks, 3 levels, 5 platforms



T. W. Metcalfe Jr.

Grand Central (IRT Division)
9 tracks, 3 levels, 6 platforms
West Fourth Street (IND Division)
8 tracks, 2 levels, 4 platforms
Columbus Circle (IRT and IND Div.)
8 tracks, 2 levels, 5 platforms
Herald Square (BMT and IND Div.)
8 tracks, 2 levels, 4 platforms
145th Street (IND Division)
7 tracks, 2 levels, 4 platforms
Fulton Street (IRT, BMT and IND Div).
8 tracks, 5 levels, 6 platforms
Chambers Street (BMT Division)
6 tracks, 1 level, 5 platforms
Underground, Brooklyn:
DeKalb Avenue (BMT Division)
6 tracks, 1 level, 2 platforms
Hoyt Street (IND Division)
6 tracks, 1 level, 4 platforms
Above Ground, Brooklyn:
Coney Island (BMT Division)
10 tracks, 1 level, 8 platforms
Above Ground, Queens:
Queens Plaza (IRT and BMT Div.)
8 tracks, 2 levels, 4 platforms

Operation.

Equipment: 6800 passengers cars. IRT Division cars 51 feet long with 44 seats (10-car trains). BMT Division cars 67 feet long with 78 seats (eight-car trains). IND Division cars 65 feet long with 56 seats (10-car trains).

Stations: 519, of which 274 are underground. Platforms, IRT Division, from 300 to 500 feet long; BMT Division, 540 feet long; IND Division, 660 feet long.

Passengers: 1,892,000,000 yearly; 5,800,000 weekday average to about 2,500,000 Sunday and holiday average. Approximately 25 per cent weekday average carried in mornings between 8 and 9 and 30 per cent weekday average in evenings between 5 and 6. During rush hours all trains operate on a 90-second headway.

Routes in Operation.

IRT Division—11
via Lexington Avenue—2 express, 1 local
via Seventh Avenue—2 express, 2 local
via 42nd Street (to Queens)—1 express, 2 local
BMT Division—22
via Broadway, Manhattan—3 express, 2 local
via Nassau Street Loop—3 express, 2 local
via Broadway, Brooklyn—2 express, 2 local
via 14th Street (to Brooklyn)—2 express, 1 local
via Queensboro Plaza—1 express, 2 local
via Franklin Avenue, Brooklyn—1 express, 1 local
IND Division—9
via Sixth Avenue—2 express, 1 local
via Eighth Avenue—3 express, 2 local
via Brooklyn and Queens—1 local

Elevated routes still in operation (eventually to be abandoned):
IRT Division—2 express, 4 local
BMT Division—3 local

Busiest street: 42nd Street, Manhattan. Contains five east-and-west subway tracks and is crossed by 20 north-and-south subway tracks as well as three north-and-south elevated tracks. Stations are located at Eighth Avenue, Seventh Avenue, Broadway, Sixth Avenue, Fifth Avenue, Grand Central, and Third Avenue.

Fastest runs: Tunnel speeds to 55 miles per hour: Lexington Avenue, Manhattan, between 42nd Street and 86th Street (IRT Division). Fourth Avenue, Brooklyn, between Pacific Street and 36th Street, (BMT Division). Eighth Avenue, Manhattan, between 59th Street and 125th Street (IND Division). The third one (on Eighth Avenue) is the longest express run on the entire system, a distance of 3.35 miles, and has been made in five minutes from standing start to a full stop. (Average speed 67 m. p. h.) Two motors per car in the train provide sufficient rapid acceleration to make such a short fast run possible.

Additional Operation:

BMT Division operates street railway and bus lines in addition to its rapid transit facilities. Equipment: 1200 trolley cars and 500 buses operate on about 85 routes in Brooklyn and Queens. Passengers: 347,000,000 yearly (in addition to the 1,892,000,000 railroad passengers) are transported over 291.4 street route miles.

Local and express trains usually branch out into diverging lines, so my route map tries to show which branches are served by expresses (making all branch stops) and which by locals. Further, the map shows available trackage for such operation except where unused. A single line means two tracks, a double line three or four tracks. Third track is available for use on most of the lines shown as two-track, but in these cases the third track is for night storage of trains only.

Best subway maps have been made by: Hagstrom Company, 20 Vesey Street, New York City. Geographia Map Company, 11 John Street, New York City. C. S. Hammond & Company, 440 Fourth Avenue, New York City.

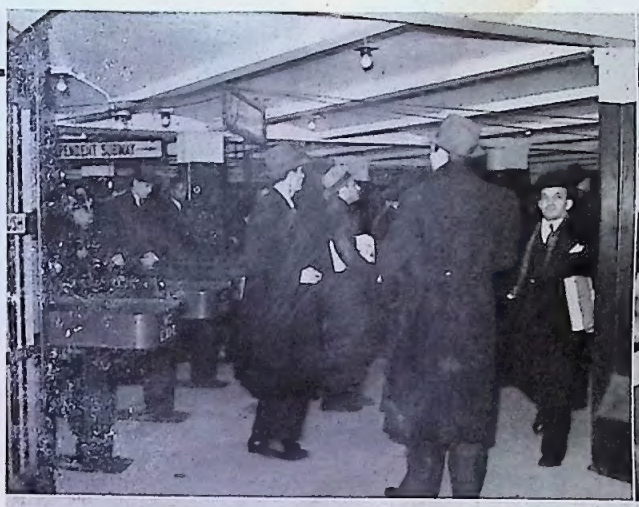
Such are the figures around which I think a much longer and more interesting article could be written. Groff Conklin has written a profusely illustrated book, *All About Subways*, which deals with subway construction. So far no one seems to have done the story about what goes on after the railroad has been built.

T. W. Metcalfe Jr.
77-14 138th St., Kew Gardens, N. Y.

Courtesy New York City Transit System.

New York City Transit System.

At left, rush-hour commuters wait in Times Square Station on the overburdened Seventh Avenue line (IRT). At top of page 7, left, is a scene in the 34th Street Station on the Sixth Avenue line (IND),



Courtesy New York City Transit System.

showing the nickel-in-the-slot turnstiles. Top, right, shows interior of No. 1281 (IND). In the center is No. 7027, a five-car articulated train of the BMT Division. No. 3806 is shown on one of the sections of the IRT Division where the subway gets fresh air. Destination of trains is indicated by colors of the lights on the front. Headlights are not used in the subways nor on the els.

Torkel Korling, courtesy Milwaukee Road.

A Trip on the Train

★ It is Experience, Opportunity, Education: a look into nature's laboratory and into the nation's history.

By Victor H. White.

DON'T you feel sorry for the prospective traveler who says, "Oh, how I dread the train trip"?

I can't help but compare such a person with the student who, having paid his tuition, refuses to read the books or listen to the lectures. The present-day rail passenger, seated in a comfortable Pullman chair, may look through a clean, highly polished glass show-window into nature's laboratory of botany, geology, forestry and wild-life study. The battle-grounds and conquest-points of history are spread before him. He needs only the lecturer or the printed word to guide him slightly, and if his mind is open and alert, he may absorb an astonishing amount of knowledge and education in the course of a short three-day transcontinental journey across this great nation of ours. Or he may absorb a proportionate education in a 20-minute commuter's journey from hamlet to city anywhere in the land.

Let us try a few minutes of this and see what happens.

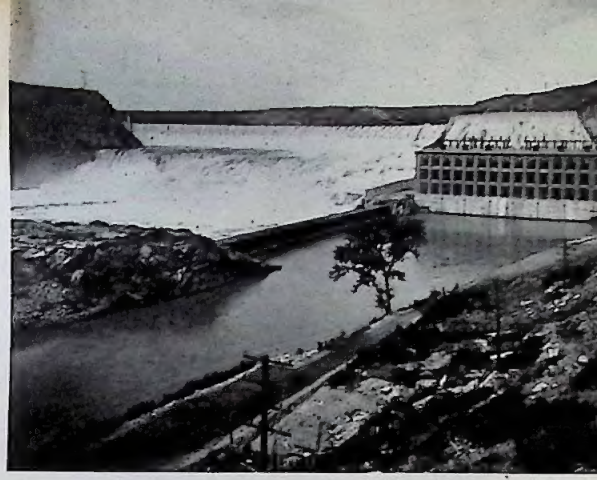
Picking time and place at random, what can we see in 19 miles of travel, 35 minutes' time on the train? On the Milwaukee Road in Montana we are just leaving Lombard, on

No. 15, the westbound *Olympian,* speeding southward up the Missouri River.

Directly across, on the opposite bank, we see through our show-window glass the Northern Pacific tracks paralleling our own. The white plume from a powerful steam engine drifts back, over a string of black Pullmans hurrying down the river. It is the *North Coast Limited,* No. 1, westbound. Here is one of the few places where two trains traveling toward the same point pass each other in opposite directions. As absurd as that may sound, it is true. Westbound Northern Pacific trains run northward *down* the Missouri River through Lombard and thence west through Helene, while Milwaukee Road westbound trains follow down Sixteen-Mile Creek to Lombard and then *up* the Missouri River and west through Butte. This mixup of directions is but one of the interesting things in store for the traveler's next busy 35 minutes.

At Lombard we emerge from Rocky Mountain Canyon, one mile of railroad that reputedly cost a million dollars to build. Lombard is where the oldest of the northern transcontinentals, the Northern Pacific, crosses the youngest, the Milwaukee. There is hardly any town there at all. But, at the time I last passed through it, it still possessed the distinction of never having been visited by a horse and buggy or by an automobile, except those that were carried through on freight cars. Served by two transcontinental railroads, every train on both lines stops there, but it boasts no highway, not even a wagon road. You won't find any mention of population in your atlas. Nevertheless, Lewis and Clark paused near here in June, 1805, before going on, as our train does within the next few miles, to the historic confluence of the Madison, the Gallatin and the Jefferson rivers at Three Forks, the beginning of the Missouri, part of the longest river drainage system in all the world. We are now only 54 rail miles via NP from Helena, the capital of Montana.

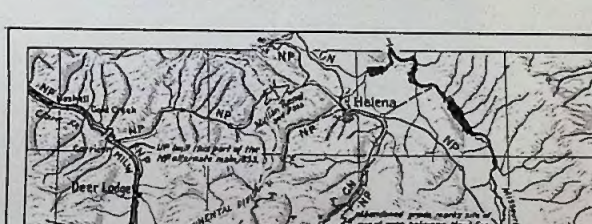
But our train rushes on up the river, turning south now and veering westward to leave the Missouri and follow the Jefferson. We are close to Three Forks, where a branch line leads to Bozeman on the Gallatin, the same beautiful river that cuts its canyon-way down from the romantic Yellowstone, land of steaming waters and hell-like fire holes.



Courtesy Milwaukee Road.

Power for a railroad.

Electric power for the Milwaukee Road is generated at this power house north of Helena, Mont. The map (scale, 30 miles to the inch) is of the Montana mining district, and Mr. White's trip from Lombard to Three Forks may be traced at the lower right.



Linn H. Westcott.

Here is one of the entrances to our greatest national park.

There are low, crumbling mountains on all sides of us now. On their gray slopes you may study the forest growth of jack pine and dwarf spruce. The geology of these gold-bearing rocks may interest you. Or you may pause to glance a second time at the higher shoulder-land, where a few cattle graze behind barbed-wire enclosures to remind you of the vast herds that once roamed this open range land. You have read about them in those bright-covered two-gun Western story magazines. You may glance along the valleys now, especially up the Gallatin toward Bozeman, to one of the most fertile agricultural districts in the whole West.

Beginning of the Missouri River.

Looking south toward Three Forks, Mont. The Madison, Gallatin, and Jefferson rivers unite here to form the Missouri. At left is Northern Pacific's right of way; at right is the Milwaukee Road's. Rival trains bound for the same destination pass each other in opposite directions at this point.

If you have the spirit of adventure in your heart you may pause to consider the short distance to Ruby Creek and Montana's Virginia City. Only a few miles up the Jefferson, on a graveled hillside, lies the tiny town that was once the capital of Montana Territory and boasted a population of 200,000 souls, most of whom lived in tents. Here was the scene of great vigilante activity. It is within the memory of those still living that men were hanged to trees by the neck until dead. A few years ago you would have found a half-dozen deserted gold dredges cluttering up hundreds of acres of turned-over gravel, and a few old-timers who would still look at you with bright-lighted, though aging, eyes, and say, "It ain't all over. They'll find more gold here some day."

And strangely enough, you would find their faith has not been in vain. The raising of the price of gold to $35 an ounce has reopened some of the old workings. The old-timers grin and say, "I told you so." But men are not now strung up to trees.

Three Forks: Here Lewis and Clark camped and rested. Here their drunken French guide refused to go farther. Old-time Montanans will tell you that the Frenchman never did know the country. It was his black-haired Indian wife Sacajawea, the dark-eyed little woman whom history has honored and revered, who stepped forward and said, "I will lead you to the head of the Great River that flows to the Mighty Water." It was her way of saying, "I know how to reach the Snake, that flows into the Columbia, that in turn reaches on to the Pacific." Lewis and Clark followed her and repaid their debt in bad whisky which they gave to her worthless husband.

Thus, as we hurry along, on our glistening steel rails, in our comfortable Pullmans, history comes to life. It unfolds about us, before our eyes, in startling panorama that stirs the memory of human souls and striving people.

The Missouri, which we are just leaving, has been flowing on for untold centuries, north through the Gate to the Mountains, through its long, torturous canyon, and past Great Falls. Just below this, Montana's second largest city, it goes tumbling over the Great Falls of the Missouri. There, an enormous power station gathers up its white-sprayed energy and transforms it to silent white coal. Over more than a hundred miles of high-tension line its power flows back to our motors. We are traveling on an electrified road, the longest stretch of electrified railroad in the country, second longest in the world. The power of the river that flows past our window, the same waters against which Lewis and Clark struggled with their frail canoes nearly 150 years ago, is actually pulling our train!

Well, our half hour is up. The *Olympian* is slowing down for Three Forks station. There is a pause in in our schooling. A lunch counter here will give you a sandwich or a cone or a candy bar. You may

Copyright, A. Schlechter, courtesy Northern Pacific.

pause to look at the fish in the artificial pond alongside the station platform. Or you can run over and glance at the Sacajawea monument.

The train will pause with little commotion. It will start silently, without any hubbub of steam or chugging and splurting of smoke. We go on now toward Butte. The following half hours will be just as enlightening as was the last. The romance of copper. The story of a United States senator who stood in the bay window of a Montana hotel and threw big silver dollars among his constituents below to hold their attention while he made them a speech.

Yes, the next half hours will be just as interesting. Anaconda, for example, where in a short few hours the great smelter can take enough arsenic to kill a million rats out of the smoke that goes through its sky-reaching stack.

So you can see why I always thrill at the thought of a train ride.

There isn't a mile of railroad in the whole country but has a story. To me, it is the Great Experience. It is Opportunity. It is Education. It is the most interesting thing I know anything about. It is experience, entertainment and pleasure, all rolled into one. A trip on the train.

Railroads of Pennsylvania

Ten thousand miles of railroad with a pedigree.

By William Moedinger Jr.

They are there, there, there with earth immortal
(Citizens, I give you friendly warning).
The things that truly last, when men and time have passed,
They are all in Pennsylvania this morning.
—RUDYARD KIPLING.

IN STRIKING contrast to the fabulously spectacular playgrounds of the West, with their widely heralded monopolies on perennially snow-capped peaks, older-than-history trees, timberline passes, and mile-deep canyons, industrially famous Pennsylvania often seems dull and unattractive to the prospective traveler. This conception is just about as accurate as a sweltering description of Death Valley labeled California. Pennsylvania has, to be sure, a generous share of the country's crowded cities, belching blast furnaces, roaring foundries, and dismal factories, producing everything from zippers to locomotives and ships, but these somber attributes to industrial prominence are by no means the dominating features of the Pennsylvania picture.

Within the boundaries of this 45,000-square-mile almost-rectangle is a variety of enchanting topography no less diversified than its industries. Running through the central section from northeast to southwest are two ranges of mountains, which, like great fences, divide the Keystone State into three geographical belts. East of the Blue Ridge range is a vast rolling country of agricultural fame, a land studded with brightly painted, well kept farms, and naturally landscaped with velvet-green pastures, willow-lined brooks, and checkerboards of waving, golden grain, tall corn, succulent tobacco, and second-growth woodland. Between the Blue Ridge and the Allegheny Mountains is a sparsely settled region of more mountains. Rising 500 to 1000 feet above the floors of the intervening valleys are chains of longitudinal hills. Beneath the surface of this rugged region lies much of the state's mineral wealth, and mantling the slopes and crests is a substantial part of the Commonwealth's 13 million acres of rapidly maturing timber, evidence of a long-range plan of forest conservation inaugurated near the turn of the century. West of the Allegheny range is the Appalachian Plateau, which varies from broken in the east, through rolling and undulating, to flat on the Lake Erie plains in the northwest. This region includes not only a great deal of fertile farm land, but the world-famous oil country around Bradford.

These are the endless and ever-changing panoramas which inspire and reward every traveler who has dared to brave the much overemphasized ugliness of Pennsylvania's workshop in search of Pennsylvania, the playground. Yes, all of this grandeur so aptly chronicled by Kipling—combined with a host of other attractions, historic shrines such as Valley Forge and Gettysburg, publicly developed and maintained recreational areas, and year-'round sports of every description—make the state an ideal vacation goal.

The railroad enthusiast, too, will find within the Keystone State a veritable treasure chest, for here are more railroads than in Arizona, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming combined. Today, not including several purely industrial and interurban and suburban railroads, there are 71 railroads, whose aggregate route mileage exceeds 10,000 miles, tracks demanded by an incomparably diversified and sprawling industry and made interesting by a unique

Kittaning Point, Horseshoe Curve.

Probably the most famous horseshoe curve in the country is the one on the Pennsylvania Railroad. Here a Johnstown local rounds Kittaning Point.

geography. Here are railroads everywhere of every conceivable size and description: steam railroads, electrified steam railroads, and interurban railroads; standard gauges and narrow gauges; single-, double-, triple- and quadruple-tracked arteries of commerce, and seldom-used, stubby feeder lines whose light rails, more often than not, are but twin ribbons of rust. For hundreds of miles, by foot or in a car, you can follow trackless rights of way, nostalgic vestiges of railroads which never got beyond the cut-and-fill stage, or of railroads which were once bustling enterprises but succumbed inevitably to the private automobile and unregulated competition. Days can be spent just riding the lines of one railroad alone, or within the space of the normal individual's daily waking hours half a dozen lines can be sampled. Literally unlimited are the railroad lover's opportunities in the Commonwealth of Pennsylvania.

STATE historians point with pride to the fact that the first railroad in America was built and operated near Crum Lynne (in the vicinity of the present Baltimore & Ohio and Pennsylvania main lines between Philadelphia and Chester) by one Colonel Leiper in the year 1807 for hauling stones from his quarry to navigable water. America's third and fourth railroads were the Mauch Chunk Railroad and the Delaware & Hudson Canal Company's 16-mile stretch of track between Honesdale and Carbondale, also in Pennsylvania.* Both of these lines were built as

* The second railroad was the Quincy Granite Railroad in Massachusetts.

H. W. Pontin, courtesy Railroad Photographs, 47 Royal St., Allston, Mass.

coal carriers and operated until a few years ago, the former as the Mauch Chunk Switchback, the latter as the Honesdale Branch of the Delaware & Hudson Railroad. It was on the Honesdale line that Horatio Allen engineered the locomotive named *Stourbridge Lion* on its initial run, a six-mile round trip which, though unsuccessful, introduced steam for the first time to commercial railroading in this country.

While both of these railroads are interesting and contributed significantly to early railroad transportation, they were little more than shuttles between coal mine and canal.

During the first quarter of the nineteenth century, Pennsylvania's transportation problem became one of linking the East, dominated by Philadelphia, and the western quarter of the state, especially the region surrounding and including Pittsburgh. Early Pennsylvanians were well aware of this need, but it seems that both the people and the politicians were adverse, if not antagonistic, to railroads as a solution to the problem. As early as 1823, John Stevens, the father of American railroads, obtained a charter from the Legislature, granting him the authority to solicit funds for and construct a railroad between Philadelphia and Columbia. Scarcely, however, had he completed his preliminary survey when residents along the line of the proposed railroad voiced their objections to his "instrument of the Devil." Some were motivated by deeply rooted superstition, but the majority objected purely for selfish reasons. Farmers in the Philadelphia area, for instance, claimed their trucking businesses would be ruined by the influx of garden products from the western counties. Following this terrific uproar among those whom the railroad would have benefited most, Stevens' meager hopes were blasted completely seven months later when the legislators passed a bill for the construction of a system of canals between Philadelphia and Pittsburgh.

But what appeared to be the fatal blow to the future of railroads in the Keystone State was in reality a boon. Within five years the people were so disgusted with treasury-depleting waterways that the legislators were forced to reconsider Stevens' project. Instead, however, of permitting private interests to foster the project, the state, with an appropriation of two million dollars, assumed

John P. Scharle.

the charter previously granted Stevens and in the Spring of 1829 commenced construction on the 82-mile Philadelphia & Columbia Railroad. The politicians viewed their concession to the tax-burdened public as a bold and impractical venture, but they comforted themselves with the fact that the remaining 312-mile link between Columbia and Pittsburgh would consist of a time-proved canal, the kind of ditch that already linked Albany and Lake Erie and was stealing all of the lucrative traffic between the consuming, cultured East and the uncivilized but incalculably rich Western frontier.

While work on the P&C was being rushed in order to catch up with the rapidly progressing western link, the canal builders struck a snag that further jarred the self-styled infallibility of the legislators. The canal just wouldn't go over the Alleghenies in accordance with their paper plans. Thus, in 1831, not as a matter of appeasement but as the only alternative, the Portage Railroad was born to link the canal basin at Hollidaysburg with the one at Johnstown.

Finally, in the Spring of 1834, when the canals were thawed, the entire route between Philadelphia and Pittsburgh was opened to the public. The jaunt which many a railfan takes merely for a superb ride and a day's outing was then an arduous journey, a matter for serious contemplation and not to be embarked upon without first ascertaining the absolute necessity for it and writing one's last will and testament. At Philadelphia the dauntless traveler would board a horse car of the Philadelphia & Columbia, and in less than nine hours he and his baggage would be in the course of transfer from rail-car to canal boat at Columbia, a feat made possible

John P. Scharle, 64 Vermilyea Ave., New York, N. Y.

High-speed interurbans.

At far left is 1004 of the Lehigh Valley Transit, fast interurban that once made speed records on the defunct Cincinnati & Lake Erie. Leaving the suburban terminal at 69th Street in Philadelphia (at the end of the subway line), these cars ride the Philadelphia & Western's third rail to Norristown, then pole-trolley at high speed to Allentown, Bethlehem, and Easton—one of the best electric railroad rides in the East. The car at near left is one of the streamliners on the Philadelphia & Western; it looked radical 10 years ago when this railroad pioneered in the streamline field. This junction is Villa Nova, the point where the Norristown cars turn from the suburban stem.

only by changing motive power every dozen miles. The 172-mile journey by towboat from Columbia to Hollidaysburg served to relax the speed-strained nerves of the traveler just off the P&C and to prepare him for his second exposure to railroad transportation, the 36-mile mountain-hurdling Portage Railroad. To gain the summit, 1400 feet above Hollidaysburg, and to effect a descent of 1200 feet from the summit of the mountains to Johnstown, the Portage Railroad consisted of five inclined planes on each side of the Alleghenies. Two stationary steam engines at the top of each inclined plane pulled the cars up and eased them down the five per cent grades. On the level stretches of track between the planes and from No. 1 and No. 10 planes to the canal basins on their respective sides of the mountain, horses provided the motive power. The four-hour journey over the Portage Railroad ended at Johnstown, where the traveler again boarded

Climbing for coal.

The Mauch Chunk incline, top, right, was first of the many gravity railroads in Pennsylvania. Cables lifted the cars, and they usually coasted back on another track. Diamond marks on the map, page 27, show sites of other such inclines. The old coach at Hawley, bottom, operated on the gravity road of the Pennsylvania Coal Company between Pittston and Hawley, paralleling the Carbondale & Honesdale. Both were 4'-3" gauge.

Both, S. H. Fredericks Jr., 55 W. Main St., Lock Haven, Pa.

a towboat for the 104-mile float to Pittsburgh. Some of the freight boats were built in sections so they could be moved bodily on the cars of the two railroads.

On every count, however, the state-owned system proved increasingly burdensome to the taxpayers, less attractive to shippers, and more of a headache to the legislators. This was due mainly to congestion and to the mixed usage of horse and steam power by the private operators. Shippers in the Pittsburgh area preferred to route their tonnage via the Ohio and Mississippi rivers, through the Gulf of Mexico, and up the Atlantic Coast to avoid the costly and inconvenient transfers between towboat and rail at Johnstown, Hollidaysburg, and Columbia. Agitation for an all-rail route across the state was supported by strong arguments proving the superiority of private ownership as exemplified by a number of small roads in the eastern part of the state, including the Philadelphia, Germantown & Norristown, the Philadelphia & Reading, and several others which now combine to make up the Reading Railway. Some of these roads had been chartered nearly a decade after the state system was born, yet, under the guidance of progressive businessmen, they had become prosperous institutions, community assets.

Alexander L. H. Darragh, 5836 N. Wayne Ave., Chicago, Ill.

Narrow-gauge pastoral.

Washington & Waynesburg (Pennsylvania System) hasn't turned a wheel for business in years, but a speeder patrols the right of way periodically just in case coal in Greene County is opened up.

The short-sighted legislators, however, would grant no charters for railroads which might in any way glean traffic from the state system, for they were aware that even the most feeble competition would eventually prove fatal to their waterways. Then, in 1846, the aggressive Baltimore & Ohio management applied to the legislature for a charter to extend their rails, already bright with traffic as far west as Cumberland, to Pittsburgh.

Threatened with the loss of all western traffic to the rival port of Baltimore, Pennsylvania businessmen reminded the politicians of the coming election and demanded a charter be granted at once for a railroad across the state. Within a year the infant Pennsylvania Railroad started construction between Harrisburg and Pittsburgh. In 1857, three years after its completion, despite the handicap of a tonnage tax imposed by the state on all rail shipments during the open season for the canal (from early Spring until late Fall), the Pennsylvania Railroad had not only established a reputation as a dividend payer on the same traffic which had never begun to pay for operation of the canal, but further startled the bewildered waterways advocates with an offer to purchase the entire state-owned rail-canal system. Realizing full well that acceptance of this offer would be the only means of saving at least part of the millions squandered on the relatively impractical canals, the legislature accepted, and the old Philadelphia & Columbia Railroad became an integral part of the Pennsylvania Railroad.

The history of the Pennsylvania Railroad from here on is a tale of progress and expansion, the acquisition of innumerable strategic routes and feeders, adding up to more than 10,000 miles today, 4000 of which serve the Keystone State alone. Of all the other railroads, which account for the remaining 6000 miles in the state of Pennsylvania, there is a very similar story, on a smaller scale, of course, but equally spectacular. For example, the growth and development of the present Reading System into the world's greatest anthracite coal carrier is always an interesting story, a veritable drama of American motive power from *Old Ironsides*, through quaint Mother Hubbards, to the sleek Pacifics which pull the *Queen of the Valley* or the *Crusader*. Intriguing episodes are the pincer invasions of the Baltimore &

Robert F. Collins, 16 Lee Ave., Glen Rock, N. J.

Galeton-Addison local on the old B&S.

Between Galeton, in north-central Pennsylvania, and Addison, just across the state line in New York, the B&O runs trains 78 and 79, typical passenger-mail-express locals. This line is part of the old Buffalo & Susquehanna, which the B&O has been operating under agreement since January 1, 1932, and connects with the Buffalo, Rochester & Pittsburgh, which has also been operated as a part of the B&O since the same date. As far as passenger service is concerned, the Galeton-Addison segment is an island, for connecting B&O lines to the southwest are operated for freight service only. The local does, however, connect Galeton with mainline passenger service of the Erie, which runs through Addison, and the local runs up to Addison just in time to meet the *Atlantic Express* eastbound and the *Erie Limited* westbound. It returns to Galeton after a few minutes for loading the mail and express which comes in on both Erie trains.

Ohio and New York Central railroads into the state's lucrative bituminous pie and the attempts of other systems or groups of systems to establish new east-west lines to compete with the Pennsylvania's main line. In short, the past, present, or future of the state's vast network of railroads is a rather complicated tale in countless chapters to which there is but one appropriate preface—first-hand exposure.

Despite the fact that Pennsylvania's state capital is served by but two companies, the Pennsylvania and the Reading, it is an ideal place from which the first-time visitor and his friends can most advantageously conduct their touring and railroad-inspecting operations. Here the Pennsy comes out of the mountains and spreads like a fan into all the plain regions. Well spent is an evening under the old train shed of the Pennsy's Harrisburg station. Trains from Washington, New York, Chicago, Buffalo, Erie, Elmira, and the Cumberland Valley may be seen. Here great GG-1 electrics dispose of their trains while old faithful K-4 Pacifics take over.

If at all possible, plan to spend an extra day in and around Harrisburg. While your non-railfan friends are absorbed in the cultural attractions of capitol hill and the rare beauty of the river front, hop a bus to Rutherford, a suburb east of town. Here, in addition to the classification yards, you will see a variety of Reading motive power, from 0-4-0 Mother Hubbard switchers to the 3000-series Santa Fe types. Here, too, will be some Central Railroad of New Jersey and Western Maryland power.

After lunch, take a bus to Enola, across the river, but first tell your friends that you won't be back in time for dinner. Here's a

show that passes the hours like minutes. The north end of the Enola classification yards is a cavalcade of steam, heavy freights to and from the West and North; the southern end sees a parade of groaning electrics to and from the East and South. Centered in this almost continuous flow of traffic are the two humps. Between your ringside seat on the side of the hill along the highway and the eastbound hump is a single track over which trains not requiring classification pass. Beneath and on each side of this track are the inspection pits from which sharp-eyed inspectors scrutinize every journal, wheel, frame, and brake rigging as the train slowly moves on. If there are no defects, the train will stop only long enough to change from steam to electric. Toward later afternoon work your way north to the western approach of the famous Rockville Bridge, where you can watch the freights pouring across the bridge toward you from Williamsport and the North, as well as the steady stream of freights passing almost beneath your feet from the West.

Amid giant test tubes.

A B&O New York train originating in Pittsburgh passes between bluffs and blast furnaces as it leaves the Smoky City. Through trains from Chicago use the tracks of the Pittsburgh & Lake Erie because their own are not as well suited and are needed for freight traffic. B&O now operates the former Buffalo, Rochester & Pittsburgh and the Buffalo & Susquehanna.

Courtesy Baltimore & Ohio.

For those who like a general view—or panorama, as it were—of Pennsylvania and her railroads, the following tour is highly recommended. It is in the form of a closed circuit; and, for the sake of illustration, begins and ends at Harrisburg. For the fan, however, who comes from out-of-state, no matter from which direction or by what route, this trip may be completed from any point, thus avoiding the necessity for retracing in the course of entering and leaving the state. As described, it covers practically the entire state in seven days on first-class trains of six steam or electrified steam railroads and two interurban electric roads. While the tour piles up the staggering total of 1504 miles, don't allow a limited time or a restricted budget to discourage you, for the tour is nothing more than a series of much shorter, related trips, each complete in itself. It can very conveniently, for example, be split into two short tours out of Philadelphia or Harrisburg.

Board the Pennsylvania train which leaves Harrisburg just before noon, bound for Buf-

Crossing the Schuylkill.

When the Philadelphia & Reading was built in 1838, the 1931-foot Black Rock Tunnel was a major engineering project. The main line crosses to the north bank of the river as it leaves the tunnel and proceeds upon its way to Reading and the anthracite mining districts around Pottsville and Mahanoy City. The Reading and the Central of New Jersey are largely owned by B&O.

Donald W. Furler, 65 Glen Ave., Glen Rock, N. J.

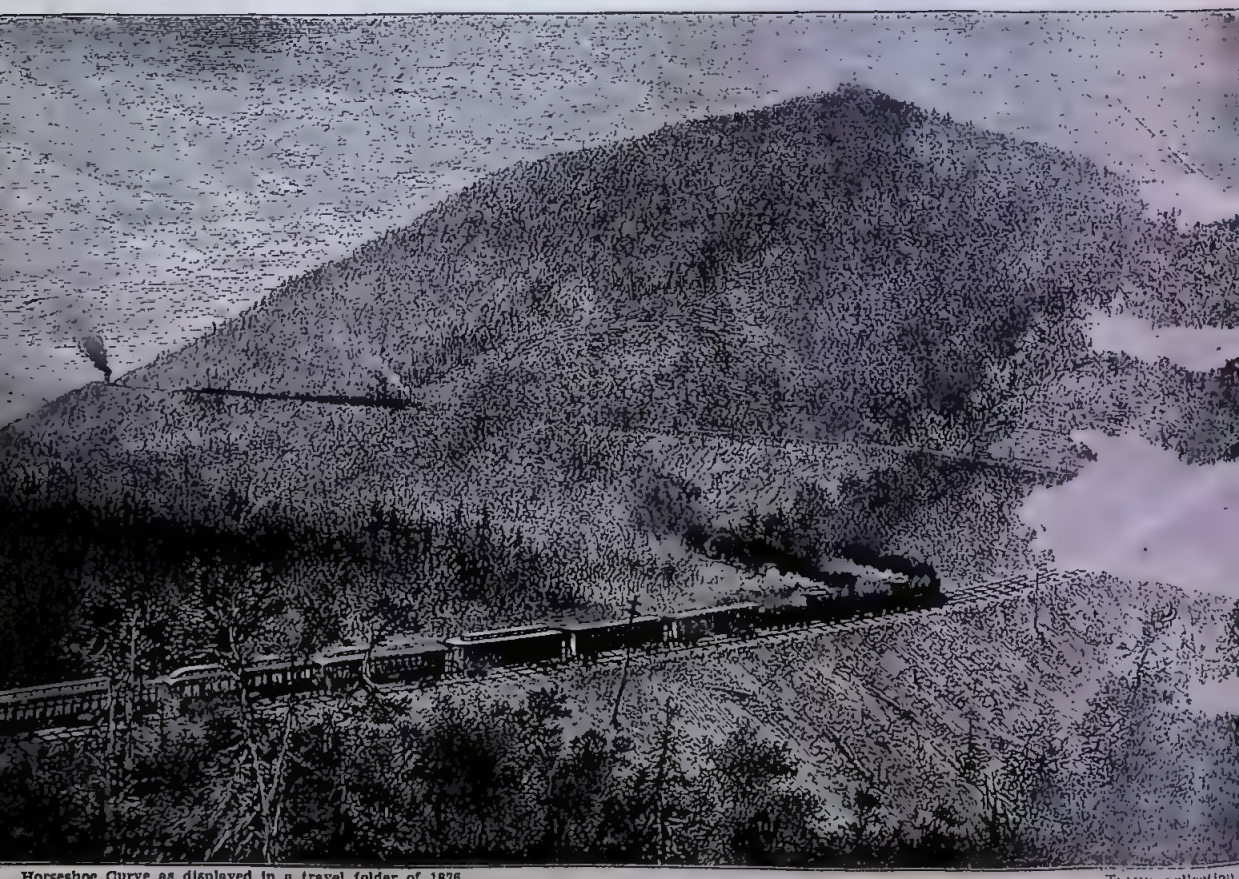
falo and Erie. For nearly 160 miles the track parallels the beautiful Susquehanna River, north to Williamsport, then west to Keating. Between Browns and Keating the New York Central has trackage rights. A few miles before reaching Driftwood, the Baltimore & Ohio crosses over the top and parallels the line, on the opposite side of the river, to Driftwood, junction with the 110-mile Pennsy branch to Red Bank. Unfortunately, passenger service was recently discontinued on the Red Bank Branch, which is now used only for freight service. At Emporium the train is separated, part going to Erie, the remainder to Buffalo. Stay on the Buffalo section as far as Olean, N. Y., for on this stretch are some of the steepest grades on the entire system. The 14 miles between Emporium Junction and Keating Summit average 100 feet to the mile.*

* Port Allegheny, 11 miles beyond the summit, is the junction with the 33-mile Coudersport & Port Allegheny Railroad, traces of which may be seen from the right side of the train. Time permitting, this short line is worth a day's layover.

R. W. Richardson.

At Olean, change to the Erie for the 18-mile hop to Salamanca, where you will board a Baltimore & Ohio train for the 232-mile ride to Pittsburgh on the following day. Although Salamanca is beyond the scope of this article, you will find the stay here, until early afternoon of the next day, a very pleasant one, for this town is an important point on the Erie.

The B&O ride to Pittsburgh is over the tracks of the old Buffalo, Rochester & Pittsburgh Railroad. The first few miles follow a broad valley through the Bradford oil



Horseshoe Curve as displayed in a travel folder of 1876. Trains collection.

R. W. Richardson, 34 S. Union St., Akron, O.

Brother engines.

The standard-gauge Heisler geared locomotive on the bridge is Clarion River's only steam locomotive, No. 17. This engine was once a narrow-gauger operating on the Tionesta Valley with its brothers, including No. 10, a 2-6-0, shown at Sheffield Junction. These roads now belong to a chemical plant at Hallton where charcoal and acetic acid are made from wood brought over the narrow-gauge. Tionesta Valley once covered considerable territory with its slim track, most of which is now abandoned. The Clarion River has a combine used on contract to take children to school.

country to Bradford, where this double-track line begins the 24-mile climb to Mount Jewett Summit and the town of the same name. For many miles the ride, in contrast to the previous day's, is a high one, affording the traveler an almost unbroken, yet ever-varying, panorama of the surrounding country.* Between Mount Jewett and Clarion Junction the train uses Erie tracks, while south of Clarion Junction the Erie uses B&O tracks. The central portion of the line penetrates the very heart of the soft-coal country, which accounts for the many railroads between Ridgway and Butler. Below Ridgway, coming in from the right, is the Clarion River Railway. In Brockway, or on the opposite side of the Clarion River, for example, it is possible to see trains of the B&O, the Erie, Pennsy, Pittsburgh, Shawmut & Northern, and the Pittsburgh & Shawmut, while, south of Brockway, don't be surprised to see a New York Central coal drag take the siding for you.

Pittsburgh is another veritable gold mine for the railroad-minded. Serving the metro-[illegible]tan and suburban districts is one of the finest street railway systems in the world, basically operated with P. C. C. cars. Serving the more remote areas to the east and [illegible]th are the high-speed lines of the West [illegible] Railways, a first-class interurban sys-[illegible] city proper can boast of only five [illegible]s, but within a radius of 15 miles [illegible]umber of others, including the Monongahela Railway, the Montour Rairoad, the Union Railroad, the Bessemer & Lake Erie, and several terminal and switching roads. Both the B&O and the Pennsy operate frequent steam suburban trains to the various outlying districts. If your thirst for narrow gauges is absolutely unquenchable, buy a 64-mile round-trip ticket to Washington. Here you can see the remains of the once-proud Waynesburg & Washington Railroad, a slim-gauge ghost railroad if there ever was one.

With an extra two days, take a bus to North Bessemer some afternoon and ride No. 2 of the Bessemer & Lake Erie to Greenville. Spend the night there and continue on to Erie the next morning. It's purely a one-train-a-day accommodation of a busy, heavy-tonnage railroad, but the scenery is varied and the ride replete with all of the quaint action and interest innate with the typical local train. Arriving in Erie about the middle of the morning, you have all day to look over the town, enjoy the lake-front beaches, and inspect the 12-mile East Erie Commercial Railroad, a local switching road. As a climax to the day, saunter over to the tracks of either the New York Central or the Nickel Plate; you will find both of them alive. Leave Erie early the following morning on Pennsy train No. 570; ride as far as Corry and transfer to No. 950 for Oil City, where you can amuse yourself by watching freights on the Erie, New York Central, and Pennsy until No. 902 leaves for Pittsburgh late in the afternoon.

With a ride on a secondary main line of the Pennsylvania behind you, and, quite likely, a branch or two of even less importance to your credit, you have been primed for a real ride on the Pennsylvania Railroad. In all the country there is no ride quite like that between Pittsburgh and Philadelphia, embracing the mainline portions of the Pitts-

* The hiking advocate will do well to stop over for a day or two at Mount Jewett. Here, combining to make the grand scenery even more interesting, are the tie-ribbed grades of several abandoned railroads and the highest railroad trestle in the state, the Kinzua Bridge of the Erie. A few miles to the west is Kane, terminus of the dormant 7½-mile Kane & Elk Railroad. In the general vicinity are the one-mile-long Valley Railroad, America's shortest line-haul railroad; the Sheffield & Tionesta Railway; and the withering, three-foot-gauge Tionesta Valley.

Top, Robert F. Collins; bottom, courtesy Pennsylvania Railroad.

Mainline scenery.

Among the famous bridges in Pennsylvania is the Erie's Starrucca Viaduct in the northeast corner of the state. It was built in 1845. Below, typical of miles and miles of Keystone scenery is this scene along the Susquehanna West Branch, not far from Lock Haven. The main lines in many parts of the state follow rivers in much this same way, with short branches extending into the nearby mining or lumbering regions. New York Central has trackage rights here for coal trains. Train 570 of the PRR is heading eastward.

Robert F. Collins.

From Starrucca's vantage.

Delaware & Hudson locomotive 1506, a 4-6-6-4, pushes while a 2-8-0, not in sight, starts up the 18-mile climb on Erie's Jefferson Division. This branch of the Erie starts under the viaduct, and is used by both railroads to reach the coal fields around Scranton.

burgh, Middle, and Philadelphia divisions. From the utter dirtiness and squalor of the Smoky City's industrial section to the wealth and beauty of suburban Philadelphia's main-line suburban district is 232 miles of incomparable railroad, a treat to the ordinary traveler, an unforgettable experience for the railroad-minded. Of the wide selection of trains between these points, there are three which will meet your requirements. No. 2, the *Pennsylvania Limited,* or No. 54, the *Gotham Limited,* are ideal trains for the through traveler, while No. 24, the *Day Express,* makes the necessary stops for the individual planning one or more of the several stellar side-trips available.* Although the Horseshoe Curve can best be seen from the right side of the train, perhaps the best general view of these 200-odd miles is from the left side, for such spectacles as the "Pack Saddle" and "Sang Hollow" between Torrance and Johnstown, "Jacks Narrows" and "Lewiston Narrows" in the valley of the Juniata, and the magnificent view of the fertile Chester Valley between Downingtown and Paoli are all to the left, not to mention the most interesting view of the Pennsy's gigantic shop layout at East Altoona.

Over the entire route you will marvel at the frequency of trains, both passenger and freight, in both directions; yet along many miles there are alternate lines over which the heavy coal drags and slower freights are dispatched, clearing the main line for the hordes of Blue Ribbon passenger trains and manifest freights. For instance, heavy freights use the low-grade line of the Conemaugh Division between Pittsburgh and Johnstown, the line you see on the north bank of the Conemaugh River between Torrance and Sheridan. At Gallitzin another double-tracked relief line leaves the main line and, via Mule-Shoe Curve and Hollidaysburg, joins the main line again just west of Petersburg. From Marysville there is a low-grade line to Parkersburg, and nine miles east of here the Trenton Cutoff, another all freight line, by-passes Philadelphia to join the New York Division just south of Trenton, N. J. The latter two lines, like the main line of the Philadelphia Division, are electrified.

THREE railroads enter Philadelphia proper —four, if you count the Philadelphia Belt Line Railroad, a municipally owned road with no equipment. For the third largest city in the United States you would naturally expect the number to be greater. The B&O, the Pennsy, and the Reading, however, serve Philadelphia well and efficiently. Both of the latter lines operate a comprehensive network of electrified suburban lines supplementary to their main lines. Within the city are several elevated and subway lines and an extensive surface system recently brought up to date with P. C. C. cars. Connecting with the el-subway system in West Philadelphia (69th Street) are two fine suburban electric systems, the Philadelphia Suburban Transportation Company and the Philadelphia & Western. It is over the tracks of the third-rail P&W that the bright yellow, ex-Cincinnati & Lake Erie and ex-Indiana Railroad interurbans glide into Philadelphia from the Lehigh Valley and Allentown. The railfan may easily and busily spend a week in and around this city, not only riding the many branches of the steam and electric railroads but also enjoying the host of other attractions. Of particular interest is the Franklin Institute, housing, in addition to a varied assortment of railroad equipment and memorabilia, Baldwin's

* These include the Ligonier Valley from Latrobe, the Huntingdon & Broad Top Mountain from Huntingdon, and the East Broad Top from Mount Union.

60,000th locomotive. Normally, the various Baldwin plants at Eddystone are inviting attractions for the guest of Philadelphia, but not during the present emergency.

The next leg of the tour utilizes the main line of the Reading Railway, a 199-mile jaunt to Williamsport. For nearly 80 miles the Reading parallels the coal-blackened Schuylkill River and a branch of the Pennsy to Port Clinton. Beginning here and continuing for the next 60 miles, the line penetrates Pennsylvania's anthracite coal region, flanked on both sides by towering man-made mountains of offal from the bowels of the earth, unpainted miners' shacks leaning at precarious angles, and coal-dust-blackened collieries on the outskirts of such cities as Mahanoy City (you won't recognize it when the conductor announces it), Ashland, and Shamokin. The country is anything but beautiful, but it is, nevertheless, intensely interesting, a sight you'll remember (together with the uniquely peculiar muffled exhaust of Reading freight locomotives) long after you have forgotten many of the breathtaking landscapes. At Sunbury the line crosses the Pennsy line north from Harrisburg along the Susquehanna River, works north on the opposite side, recrosses the river, and enters Williamsport along the north bank. If you sit on the right side as the train highballs through Halls, you can see the wye and abandoned main line of the Williamsport & North Branch, a road that was once a favorite with tourists.

Williamsport, including Newberry and West Williamsport, is listed in the *Official Guide* as a three-railroad town. Actually Williamsport can boast of four railroads, for, in addition to the Pennsy, Reading, and New York Central, it is served by the Erie, which has trackage rights on the NYC via the latter's Pine Creek Gorge line. The now-abandoned Susquehanna & New York formerly entered from Marsh Hill Junction, 20 miles north, on the Pennsy's Elmira line.

If you come from Philadelphia on Reading train No. 5, you will arrive in Williamsport in late afternoon. Lay over here until late afternoon of the following day. This will give you time to inspect the various railroad facilities in West Williamsport.

The 75 miles from Williamsport to Elmira, N. Y., are, for the most part, upgrade, and are an interesting example of single-track operation on the Pennsylvania. As an important artery between the industrial Middle East and Canada, long merchandise freights and coal trains keep the line flowing to capacity. When these freights must take the sidings for any one of the four daily passenger trains, this line is really single-track; few are the sidings that aren't occupied.

After spending the night at Elmira, get up early and catch No. 2 of the Delaware, Lackawanna & Western. Known as the *Pocono*

Central Railroad of New Jersey will run this Scranton-Philadelphia train over the Reading's tracks south of Bethlehem.

North of Philadelphia B&O's New York trains smoke up the Reading's catenaries.

Donald W. Furler.

C. Raymond Brandt, 328 Abington Ave., Glenside, Pa.

Express, this train makes most of the way-station stops but will get you into Scranton shortly before 11 o'clock. While slightly more than half of these 116 miles are in New York State, through a country ever fresh and clean-looking, the remaining miles include the DL&W's costly pre-first-World-War relocation which eased the miles through the rolling hills.*

The tour continues from Scranton, once of locomotive fame, via the Lackawanna & Wyoming Valley, a 19-mile, third-rail interurban line more familiarly known as the Laurel Line, famous for the fact that it was and is one of the few with a tunnel. At one time it extended southward to Hazelton.

(Turn two pages, please.)

* To get the best look at this feat of engineering, the Tunkhannock viaduct, as well as a ride over the old roadbed, complete with way-stations and other abandoned railroad appurtenances, drive north from Scranton on Federal Highway No. 11, the Susquehanna Trail.

Donald W. Furler.

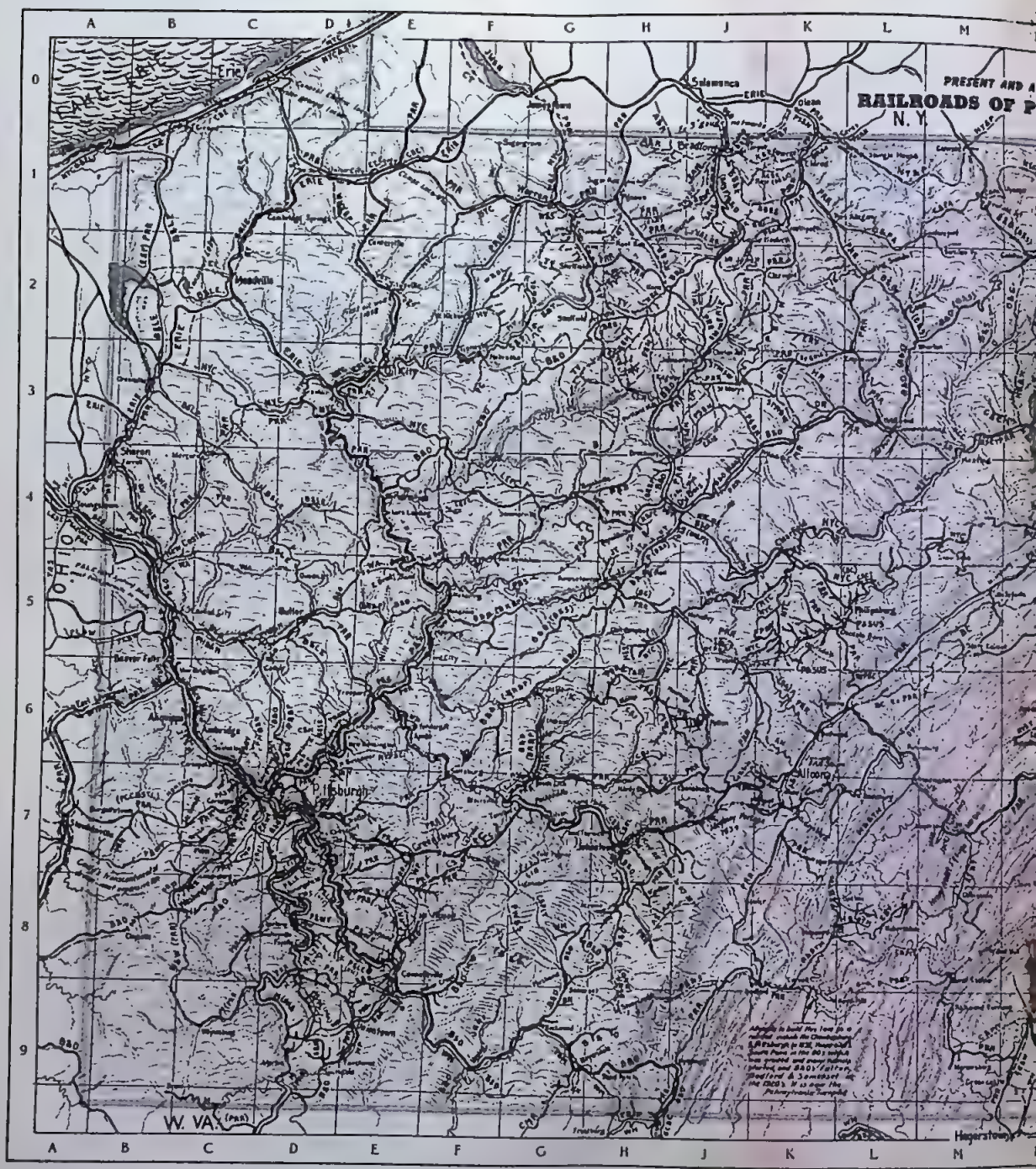
Strictly rural.

Reading's run from Slatington to Reading is locally known as the "Berksie" and is usually made by a motor. Here No. 269, one of the few remaining 4-4-0's, is at the head of train 810. First thought that comes to mind to any eastern Pennsylvania Railroad fan is electrification. The railroad has miles of copper over its tracks from New York to Washington, Trenton to Harrisburg, and Harrisburg to Perryville, Md. It started as a short suburban project years ago.

Huntington & Broad Top Mountain steam engines rarely do passenger duties.

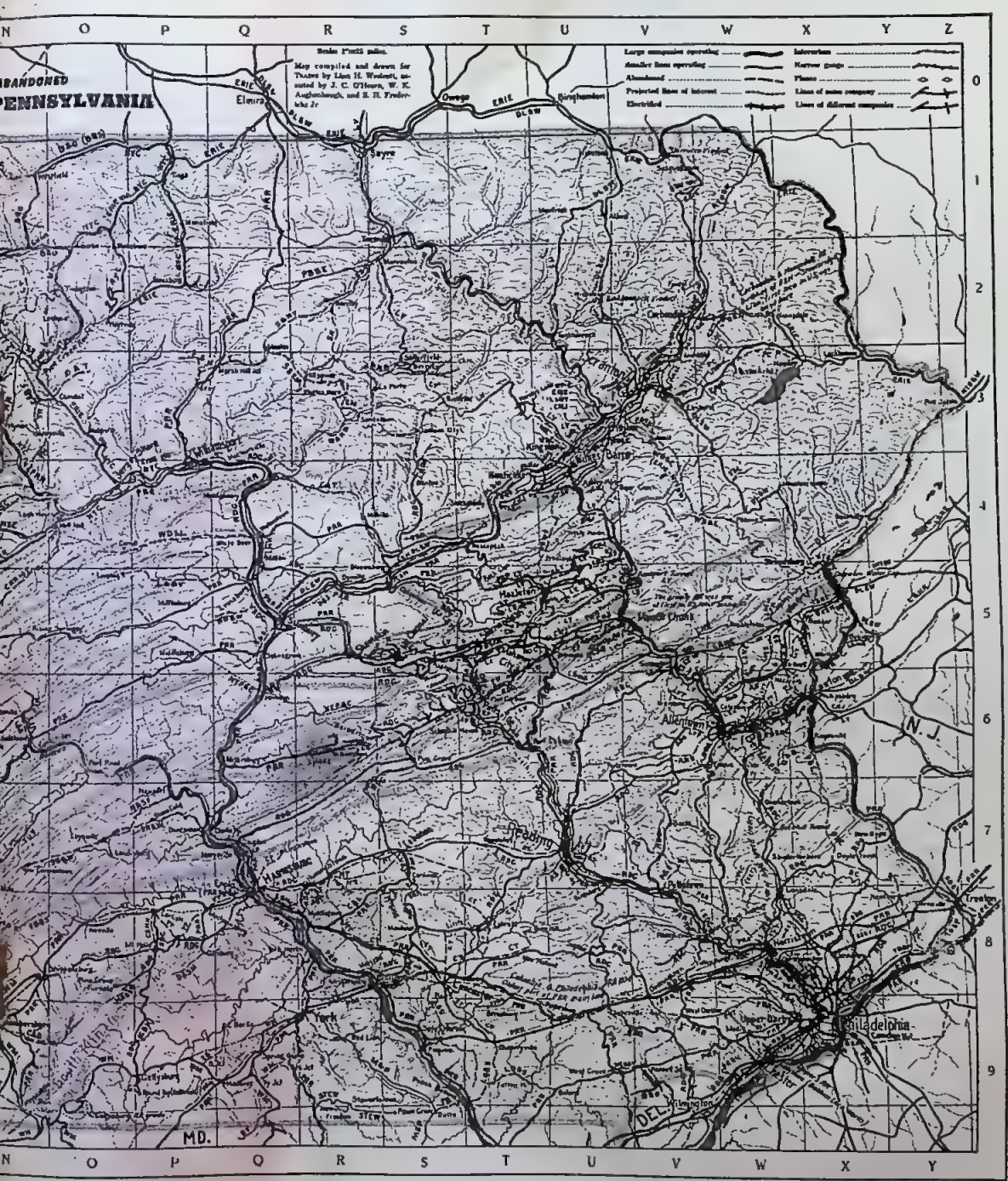
William Moedinger Jr., 23 E. Vine St., Lancaster, Pa.

Courtesy General Electric.



These railroads grew with industrial Pennsylvania.

Before you is a map of what is perhaps the world's greatest maze, the railroads of the past and present in Pennsylvania. Not only are the common carriers, the abandoned lines, and the interurbans shown, but many of the larger privately owned railroads such as lumber and coal lines are also included. This map incorporates a new feature explained in the key, upper right, whereby it is possible to trace the lines of one company in and out of such knots as the Pittsburgh, Mahanoy, and Philadelphia regions. It also shows some of the larger projects, such as the South Penn (K-9), which were never completed. A list of all the names of railroads starts on page 28, bold type indicating lines still in operation. Too late to be corrected in the list we learned of the abandonment of the Tarentum, Breckinridge & Butler. Since this is the first map of its kind ever made, TRAINS will very much appreciate receiving any corrections and additions that should be made. Please state your source of information in case we receive conflicting reports.



Copyright 1912 by Railroad Publishing Co.

This map in color.

Copies of TRAINS' map of the Railroads of Pennsylvania lithographed in three colors and in a large easy-to-read size (11 x 17 inches) will be available soon. This will be the most complete railroad map ever published and represents the first of a series eventually to cover the entire United States. A key to all railroads as well as to names of cities, junctions, etc., is included. As an added feature, any verified corrections of and additions to the map on this page will be incorporated in the new map. Copies are 50 cents each postpaid, a real map value.

Wilkes-Barre, at the western end of this interurban, is an interesting railroad community. Situated along the East Branch of the Susquehanna River, it is hemmed in from the south by a forbidding range of mountains; and both the Lehigh Valley and the Central of New Jersey main lines must go a long way around to cross this barrier in order to get to the Lehigh River. The CRR of NJ, however, operates the Ashley Inclined Plane, whereby freight to and from this immediate vicinity and the main line at the top of the mountain takes a short cut right down the side of the mountain. The whole procedure may be watched from several vantage points along the highway between Ashley and Hazelton. Wilkes-Barre was the terminal for another third-rail interurban line, which, in its course between here and Hazelton, thrust through the mountain, but the Wilkes-Barre & Hazelton has been gone well over a decade.

If your time at this stage of the tour appears to be nearly exhausted, you may, almost within the hour, continue directly to Allentown via the Lehigh Valley's streamlined *Asa Packer,* or you may wait until the middle of the afternoon, taking the *Black Diamond Express.* By either train the scenery over the mountain and through the gorge of the Lehigh River is excellent and further enhanced by the paralleling CRR of NJ tracks. Like the Pine Creek Gorge northwest of Williamsport, it is traversed only by railroad. Serving as feeders to either or both of these railroads are a number of short lines, the Chestnut Ridge, the Ironton, and the Northampton & Bath. Mauch Chunk, you will remember, was the terminus of the Mauch Chunk Switchback Railroad mentioned earlier. At either Catasauqua or Allentown keep your eyes open for the Lehigh & New England.

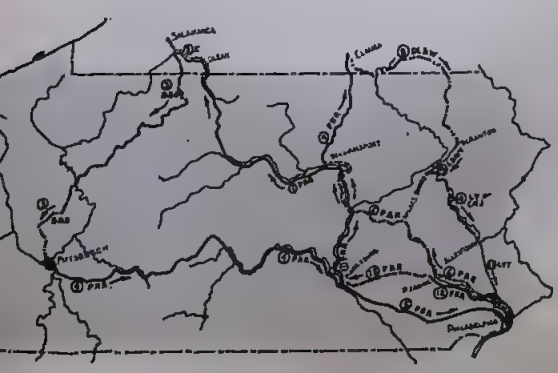
The return from Allentown to Harrisburg may be made in any of several ways. The steam fan may use the Reading, while the rabid interurban fan should, by all means, ride the Lehigh Valley Transit's 61-mile line to Philadelphia, returning to Harrisburg via the Pennsy as far as Reading, the Reading from there. Whichever way, you will find a few hours' free time in Reading worthwhile, for this is the nerve center of the Reading Railway, all of which you can see without trespassing on private property.

ALMOST too numerous to mention are the one- and two-day circle trips which can be made comfortably from Harrisburg. Here are a few:

Board a Washington-bound train of the Pennsy with a ticket good as far as Baltimore, Md. Once the main line of the Northern Central, the line is double-tracked, but is used only by passenger trains and local freights because of the sharp curves and stiff grades. Twenty miles south of York, from the left side, you will see the seven-mile Stewartstown Railroad meandering into the hills. Return from Baltimore as far as York on the afternoon *York Mail* of the rural "Ma and Pa." From York you may either return the way you came, or ride the single-track Pennsy line to Lancaster, junction with the electrified main line and frequent service to Harrisburg.

Another one-day trip begins by riding Pennsy train No. 13 to Altoona. With almost two hours to kill, you can stand on the overhead foot bridge, which crosses the main line at the station, and watch westbound hotshots tackle the Allegheny grades with nothing less than double-headers, and eastbound trains roll into town with brake shoes smoking. Around noon, board No. 510 for the 54-mile hop to Lock Haven via the Pennsy's Bald Eagle Valley Branch, with the six-mile

Below, trips described by the author.



Key to map, page 26.

Railroads operating shown bold face.

Name	Key
Allegheny & Kinzua	H-0
Allegheny Portage	J-7
Allegheny & South Side (too small to show)	B-7
Allen Street (elec.)	W-6
Allentown & Reading (elec.)	V-6
Aliquippa & Southern	B-6
†Altoona & Logan Valley (elec.)	K-7
*Altoona Northern (changed to standard gauge before abandonment)	K-6
Ashtola & Allegheny Mountain	H-8
Bachman Valley	Q-9
Bangor & Portland Traction (elec.)	X-5
Baltimore & Ohio	F-9
Bare Rock	G-9
Beaver Valley	B-6
†Beaver Valley Traction (elec.)	B-6
Beaver Valley Traction & Ohio Valley Scenic Ry. (elec.)	B-6
Bedford & Western (B&O)	H-8
Beech Creek (NYC, Jersey Shore to Clearfield)	J-5
Bellefonte Central	M-5
Bells Gap (PRR)	H-5 to K-6
Bells Run	K-3
Bessemer & Lake Erie	D-6
*Big Level & Kinzua (BB&K; later, MJK&R)	J-2

Blue Ridge Traction (elec.) V-5
*Bradford, Bordell & Kinzua (B&O) (now standard gauge) J-1
*Bradford, Bordell & Smethport (BB&K; later, MJK&R) K-1
*Bradford & Foster Brook (Monorail) J-1
*Bradford & Western Pennsylvania J-1
*Bradford, Richburg & Cuba K-1
Brookville (PRR) G-3
*Brownstone & Middletown R-8
†Bucks County (elec.) Y-7
Buffalo, Rochester & Pittsburgh (B&O) G-6
Buffalo & Susquehanna (B&O) M-2
Cambria & Indiana H-6
Cammal & Black Forest N-3
Carbon Transit. (elec.) V-5
*Carbondale & Honesdale W-2
†Carlisle & Mount Holly (elec.) P-8
Castleman River G-9
Catawissa R-4
Center & Clearfield (elec.) L-5
Central of New Jersey U-4
†Central Pennsylvania Traction (elec.) Q-7
Central Pennsylvania Leather J-3
*Central Pennsylvania Lumber (part of Tionesta Valley at Sheffield) G-2
Central RR. of Pennsylvania N-5
†Chambersburg & Gettysburg (elec.) N-9
†Chambersburg, Greencastle & Waynesboro (elec.) N-9
Chambersburg & Pittsburgh K-9
Charleroi & Belle Vernon (too small to show) D-8
Chautauqua Traction (elec.) (N. Y. State) F-0
Cherry Tree & Dixonville (PRR) H-6
Chesswick & Harmar D-6
Chestnut Ridge V-5
Citizens Traction (elec.) E-3
*Clawson Chemical Co. (part of former Tionesta Valley 3-foot-gauge line is operated by this company) H-3
†Clairton Street (elec.) D-7
Clarion River H-3
Cleveland & Erie (elec.) B-1
Colonial Iron L-8
Columbia & Montour (elec.) S-4
Columbia & Philadelphia T-8
Conemaugh & Black Lick H-7
†Conestoga Transportation (elec.) S-8
Connel Anthracite Mining S-3
Cornwall S-7
Cornwall & Lebanon (PRR) R-8
Corry & Columbus (elec.) E-1
Coudersport & Port Allegany L-1
Cumberland & Pennsylvania R-9
Cumberland Valley (now PRR between Harrisburg and Chambersburg) O-8
Danville & Sunbury (elec.) R-5
Delaware & Hudson V-2
Delaware, Lackawanna & Western W-4
Delaware River & Union W-9
*Delaware, Susquehanna & Schuylkill (LV) V-4
Delaware Valley X-4
Dents Run K-3
*Diamond Valley L-6
Dillesburg & South Mountain P-8
Donora Southern D-8
DuBoise Traction (elec.) H-4
E. I. DuPont de Nemours L-3
*Eagles Mere R-3
East Berlin Q-9
*East Broad Top Railroad & Coal Co. L-8
East Erie Commercial C-0
Eastern Pennsylvania (elec) T-6
Easton Consolidated (elec.) W-6
Easton & Washington (elec.) X-6
†Elk & Highland H-2
Emporium & Rich Valley K-2
Erie D-1
Erie Traction (elec.) C-1
Etna & Montrose D-6
*Ferney Mountain N-3
*Fox Creek F-3
†Frankford, Tacony & Holmesburg (elec.) X-8
Fulton, Bradford & Somerset K-9
Gettysburg O-9
Gettysburg & Hanover (Rdg.) P-9
Gettysburg Railway Co. (elec.) P-9
*Gleasonton & Coal Hill N-3
Glen White Coal & Lumber J-6
Goodyear L-2
Hanover & McSherrystown (elec.) P-9
Hayner Run N-3
†Hershey Transit (elec.) R-7
Hicks Run K-3
Hickory Valley F-2
Hooverhurst & Southwestern (NYC) H-5
Hunters Run & Slate Belt (Rdg.) O-8
Huntington & Broad Top Mountain Railroad & Coal Co. L-8
Indiana County (elec.) G-6
Indian Creek Valley (B&O) F-8
Ironton (Rdg.-LV) V-6

Jamestown, Westfield & Northwestern (elec.) (N. Y. State) F-0
Jefferson Traction (elec.) H-5
Jersey Shore (elec.) O-4
Johnstown & Stony Creek H-7
Johnstown Traction (elec.) H-7
Juniata Valley (elec.) M-7
Kane & Elk (operation temporarily suspended) H-2
Kettle Creek Coal Mining M-3
*Keystone Coal G-9
*Kinzua (WNY&P [PRR]) H-1
*Kinzua Creek & Kane H-2
Kinzua & Tiona H-1
Kishacoquillas Valley N-6
Lackawanna & Wyoming Valley (elec.) U-3
Lake Erie, Franklin & Clarion F-4
*Lancaster, Oxford & Southern T-9
†Lancaster & Southern (elec.) S-9
†Latrobe Street (elec.) F-7
Leetonia N-2
Lehigh & Hudson River (N. J. State) X-5
Lehigh & New England U-6
Ligonier Valley F-7
Lehigh Valley U-4
Lehigh Valley Transit (elec.) W-7
Lehigh & Wilkes-Barre Coal T-5
Leiper's RR. W-9
Lewisburg & Buffalo Valley P-5
Lewisburg, Milton & Watsontown (elec.) Q-4
Lewiston & Reedsville (elec.) N-6
Mahoning & Shenango (elec.) B-4
Mapleton & Rocky Ridge M-7
Maryland & Pennsylvania R-9
*Mauch Chunk Switchback U-5
McKeesport Connecting D-7
McKinney Steel Co. G-6
Medix Run K-3
Mercer Valley A-4
Mocanaqua & Eastern (CNJ) T-5
Monessen Southwestern D-8
Monongahela (PRR) D-9
Monongahela Connecting D-7
*Monorail: See Bradford & Foster Brook J-1
Montgomery & Chester (elec.) V-8
Montgomery County (elec.) W-8
Montour B-7
Moosic & Carbondale V-3
*Mount Gretna Narrow Gauge (C&L) S-8
Mount Jewett, Kinzua & Riterville J-1
*New Berlin & Winfield Q-5
New Haven & Dunbar E-9
*Newport & Sherman's Valley P-7
New York Central B-0
New York, Chicago & St. Louis D-0
New York, Ontario & Western X-1
New York & Pennsylvania L-1
New York, Pittsburgh & Chicago J-5, Q-6
This project surveyed in 1903 from Pittsburgh to Irvona, Herndon, Pottsville and Easton. Some years later the Harriman interests (UP) granted authority to construct but this most direct route from New York to Pittsburgh never materialized.
New York, Susquehanna & Western (not operating in Penn.) V-4
Northbend & Kettle Creek N-3
Northern Anthracite Coal Co. S-4
Northern Cambria (elec.) J-6
Northern Central (PRR-Baltimore, via Sunbury into N. Y. State) Q-8
Northampton & Bath W-6
Northhampton Traction (elec.) W-6
Oleona M-2
Oleona & Germania N-2
Oregon & Texas O-3
*Peach Bottom (M&P) S-9
Pencoyd & Philadelphia X-8
Pennsylvania S-8
*Pennsylvania Coal Co. W-3
Pennsylvania Co. (PRR) B-1
Pennsylvania & Maryland (elec.) G-9
Pennsylvania-Reading Seashore (PRR-Rdg.) (N. J. State) X-9
Philadelphia, Baltimore & Washington (PRR) W-9
Philadelphia Belt Line X-9
†Philadelphia & Easton (elec.) X-7
†Philadelphia Suburban Transportation W-9
Pittsburgh, Allegheny & McKees Rocks C-7
Pittsburgh, Binghampton & Eastern (graded in 1900 and now a highway near Towanda. Projected in 1900 from Pittsburgh to Binghampton. Only track laid was for construction) R-2
Philadelphia, Bethlehem & New England (partly abandoned) W-6
†Philadelphia Rapid Transit (electric railways in Philadelphia district) X-9
Philadelphia & Western (elec.) W-8
Pittsburgh & Butler Passenger (elec.) D-6
Pittsburgh, Charliers & Youghiogheny (PRR) C-7

Pittsburgh, Cincinnati, Chicago & St. Louis (PRR) B-7
Pittsburgh, Harmony, Butler & Newcastle (elec.) D-6
Pittsburgh & Lake Erie (NYC) D-8
Pittsburgh, Lisbon & Western B-5
Pittsburgh & Moon Run (Montour) C-7
Pittsburgh & Ohio Valley C-6
†Pittsburgh Railways (electric railways in Pittsburgh district) C-7
Pittsburgh & Shawmut E-5
Pittsburgh, Shawmut & Northern K-2
Pittsburgh & Susquehanna K-5
Pittsburgh, Westmoreland & Somerset C-8
Pittsburgh & West Virginia E-8
Pottstown & Redding (elec.) V-7
Quakertown & Bethlehem W-6
Reading (formerly Philadelphia & Reading) U-7
†Reading Street (elec. at Reading) U-7
Redstone Central (PRR) D-9
*Rew City & Eldred (BB&K) K-1
Reynoldsville & Falls Creek H-4
Rolfe H-2
Salmon Creek Lumber G-2
Schuylkill (elec.) T-5
Schuylkill & Dauphin (elec.) R-6
Schuylkill Valley Traction (elec.) W-8
Scranton (elec.) V-3
Scranton & Springbrook V-3
Scootac N-4
Shamokin & Mount Carmel (elec.) S-5
Sharpsville (B&O) B-4
Sheffield & Tionesta G-2
Slate Belt (elec.) W-5
*Slate Run N-2
Smithfield & Masontown (B&O) D-9
South Penn K-9
South Shore (too small to show) D-7
St. Clair Terminal D-7
St. Marys & Western J-3
Steelton & Highspire R-8
Stewartstown R-9
Strasburg T-8
Sugar Run R-2
Sunberry & Selinsgrove (elec.) Q-5
Susquehanna & Buffalo M-3
Susquehanna Connecting (Erie) V-3
*Susquehanna & Eagles Mere Q-3
Susquehanna & New York R-2
†*Susquehanna River & Western (has operated three gauges) P-7
Susquehanna Traction (elec.) O-4
†Tarentum, Breckenridge & Butler (elec.) D-6
*Tionesta Valley (see also Clawson Chemical Co.) G-2
Titusville Electric Traction (elec.) E-2
*Tobyhanna & Lehigh W-4
†Trenton, Bristol & Philadelphia (elec.) Y-8
*Trout Run N-3
Turtle Creek & Allegheny River D-7
*Tuscarora Valley N-7
Upper Merion & Plymouth W-8
Union D-7
United Traction (elec.) H-4
Unity D-7
Ursina & North Fork F-9
Valley J-1
†Valley Traction (elec.) P-8
Warren County (elec.) F-1
Warren & Jamestown (elec.) G-1
Warren & Sheffield (elec.) G-1
Washington Run D-8
Waverly, Sayre & Athens (elec.) R-1
*Waynesburg & Washington B-8
†West Chester (elec.) V-9
†West Chester, Kennett & Wilmington (elec.) V-9
Westinghouse Interworks (too small to show) D-7
†Westmoreland County (elec.) F-7
†West Penn (elec.) D-6, E-6, E-7, F-5
West Pittston-Exeter U-3
Western Allegheny E-5
Western Maryland F-9
Western New York & Pennsylvania D-1, J-1 (Note: Part of large system, mostly absorbed by PRR.)
Western New York & Pennsylvania Traction (elec.) J-1 (Note: Some of the right of way was the same as the old WNY&P, narrow gauge and wide gauge railroad, now absorbed by the PRR.)
Wheeler & Dusenberry Lumber F-2
*White Deer & Loganton P-4
Wilcox J-2
Wilkes-Barre (elec. in Wilkes-Barre) U-3
Wilkes-Barre Connecting U-3
Wilkes-Barre & Eastern (Erie, ex-NYS&W), largely abandoned V-3
Williamsport & North Branch R-3
Williamsport Passenger (elec.) Q-3
Winfield E-5
York Railways (elec.) R-9

* Narrow gauge, usually 3'-0".
† Wide gauge, usually 5'-2½".

detour to Bellefonte, the home of the Bellefonte Central, thrown in free of charge. Return from Lock Haven via Williamsport on the route described earlier in this article. You may alter this trip so as to include time for a ride and inspection of the 18-mile Bellefonte Central. Originally this little road ran between Bellefonte and State College, just as it does today. In 1930, by purchase of another line and construction of a small connecting link, it was extended 25 miles to Tyrone. Shortly thereafter, however, the BC ceased operations over the new extension by order of an injunction. Until a few months ago the ill-fated extension remained intact, hoping for the day when a court order would permit its use again.

If you have a flare for history, ride the Reading's 46-mile line to Gettysburg, spend the night there, take a tour of the battlefields, and leave for Baltimore on No. 44 of the Western Maryland. This two-car train, pulled by a light Pacific, is one of the finest branch-line locals to be found anywhere. The ride, too, through the fragrant apple orchards of Adams County, is made even more pleasant in a reclining-seat coach, comfortably air-conditioned. Return from Baltimore on the line of your choice.

Recommended also is a one-way trip over Pennsylvania's Dream Highway, not because the scenery is superior to that along any of the state's railroads, but for its historical significance. Many years ago, before the turn of the century, William Vanderbilt did most of the grading and completed nearly all of the tunnels now used by this toll highway. It was his challenge to the Pennsylvania Railroad's entrance into hallowed New York Central territory along the Hudson River. Before he got around to laying the track of his projected South Penn Railroad, the Pennsy and NYC came to an amicable agreement whereby the latter withdrew forever from the trans-Pennsylvania picture. During the intervening years attempts were made to revive the project, latest by the B&O as the Fulton, Bedford & Somerset, but none succeeded; and the right of way and tunnels lay hidden beneath nature's camouflage, until, of course, the Pennsylvania Turnpike Commission entered the ring.

If you thrive on following the roadbeds of abandoned railroads, there are several in the vicinity of Harrisburg. The Newport & Shermans Valley from Newport and the Tuscarora Valley from Port Royal, both

Lackawanna's Pocono Summit.

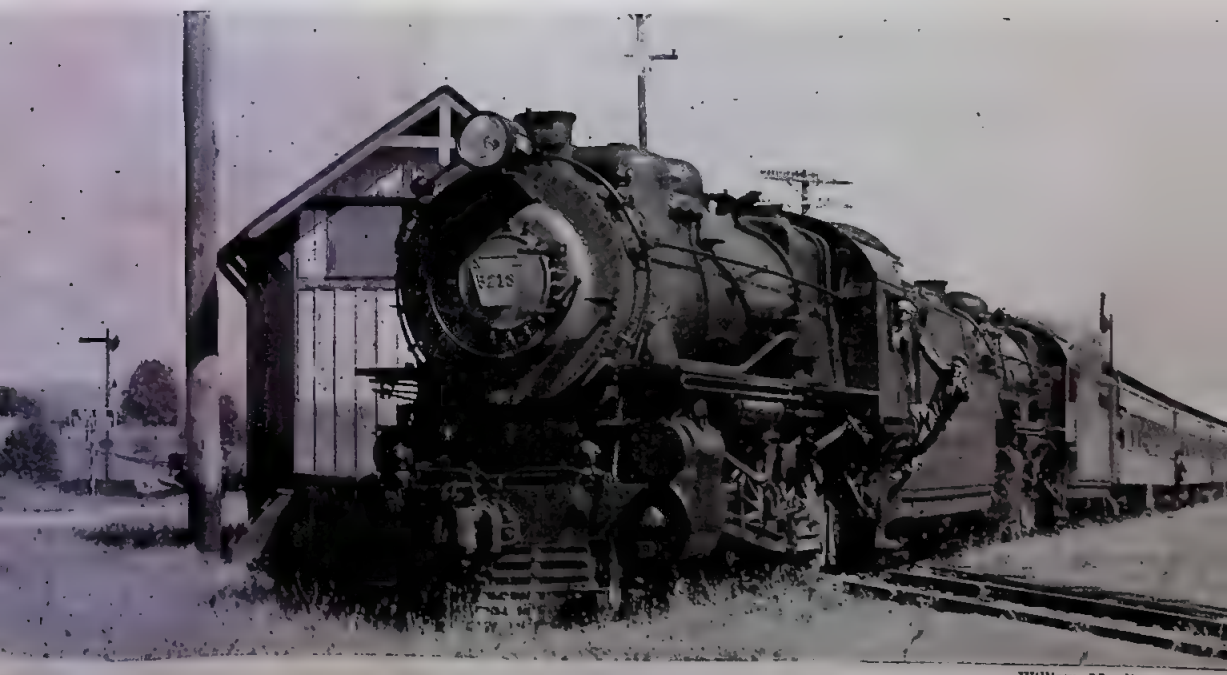
DL&W climbs into beautiful highlands north of Stroudsburg and later drops into Scranton as though from the sky. Engines 2106 and 2231 are straining westward in this photo at Pocono Summit.

M. B. Cooke, 9 Grant Ave., Jersey City, N. J.

Donald W. Furler.

Bright and yellow and goes like . . . mad. Lehigh Valley's *Asa Packer* makes a daily run from Newark to Pittston. Since this photo was taken, 1940, cars have been added and the train has been repainted red and black. Canal at right was first coal route from Lehigh regions.

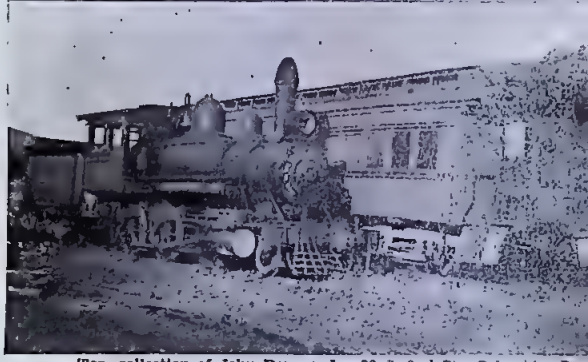
Favorite fan trip out of Philadelphia always includes a run over the PRR Downington-Lancaster Branch. Here the 1941 version stopped at the grade crossing with the Reading's Coatesville Branch. The point, too small for most maps, is called Suplee, Pa.



William Moedinger Jr.

stations on the Pennsy's Middle Division, were abandoned in the mid-thirties. Both narrow-gauge roads followed their respective valleys until the mountains blocked their paths. Oddly enough, when Vanderbilt was pushing construction of his South Penn Railroad, both of these three-foot-gauge lines started digging tunnels through the mountains so as ultimately to connect with the ill-fated South Penn. A few miles north of Lewiston, along the Pennsy's Milroy Branch, begins the trackless roadbed of the Kishacoquillas Valley Railroad, long a favorite with native Pennsylvania railfans.

PERHAPS these few paragraphs have opened your eyes to the possibilities for a railroad vacation in the Keystone State. Perhaps, in all this rambling, the railroad which interests you most has not been mentioned. This omission has not been intentional but rather because of a lack of space. Study Linn Westcott's maps of Pennsylvania and (in other issues of TRAINS) of the East Broad Top, the Maryland & Pennsylvania, the Horseshoe Curve region, the Western Maryland, the Delaware, Lackawanna & Western Bloomsburg Branch, the Pennsylvania Railroad electrification and the New York, Ontario & Western; they offer more suggestions and reveal more about the state than anything that can be written.



Top, collection of John Denney Jr., 28 S. 2nd St., Columbia, Pa.; bottom, William Moedinger Jr.

Old-timers.

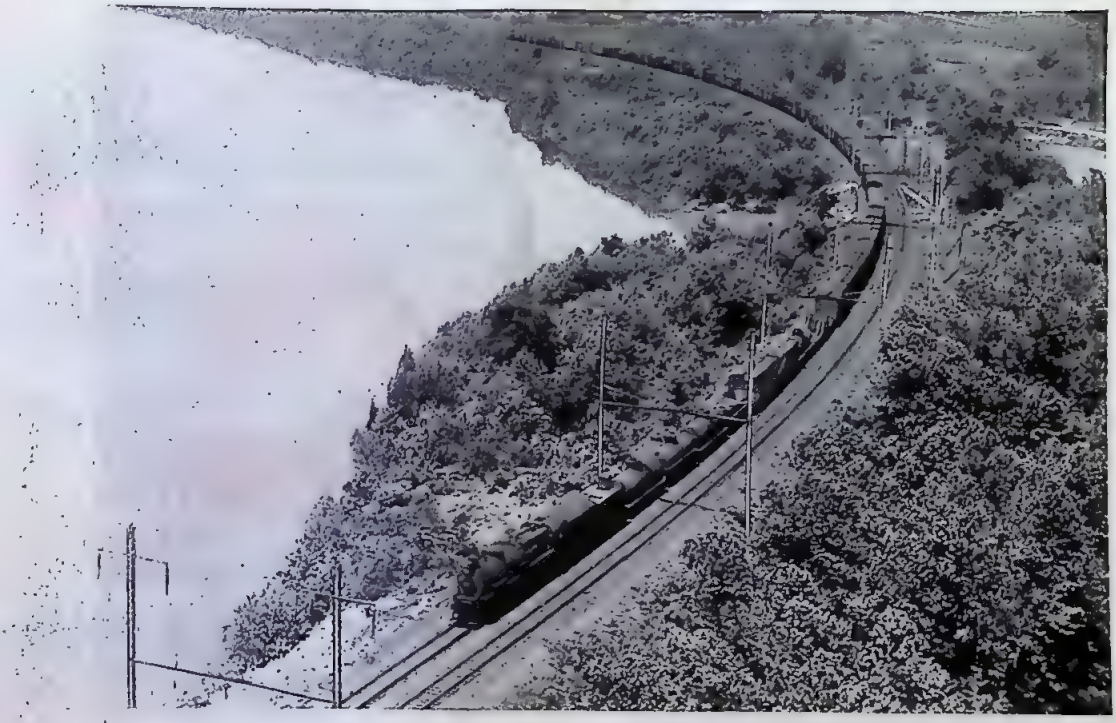
The narrow-gauge Lancaster, Oxford & Southern was part of the old Peach Bottom system, parent of the Ma & Pa out of York and Baltimore. It was abandoned some years ago. Lower picture is of Engine 6 of the standard-gauge Sheffield & Tionesta.

English relics.

Tiny, the only complete broad-gauge engine in existence, is one of the most interesting relics maintained by the Great Western Railway of Great Britain. Built in 1868, it was later used at the Newton Abbot engine terminal, with one of its flanged wheels removed and a pulley wheel substituted, as a spare stationary engine working the pumps in the boiler house. Today, *Tiny* stands as a relic of this almost-forgotten broad-gauge era of British railways.

The Great Western has many other relics of by-gone days, among them a perfect model of the *North Star*, the road's first locomotive, which was used in the opening of the line between Paddington and Maidenhead on May 31, 1838. It was reconstructed in 1925 with many of the original parts, one of which, a buffer stuffed with horse hair, was doing duty as a piano stool at Bath. It was brought to America in 1927 as the stable companion of the *King George V* in connection with the Baltimore & Ohio centenary.

Another broad-gauge locomotive, the *Hedley*, was, in turn, used to drive a stone-crushing plant and a steam boiler at Neath until, with the introduction of electricity at these works in 1928, it was pensioned and scrapped.



William Moedinger Jr.

Broad curves mark the lower Susquehanna.

This Pennsylvania Railroad freight line was electrified shortly after the mainline electrifications to Washington and Harrisburg. It forms an important low-grade freight connection between the two main lines. This scene is at Marietta, near Columbia. Notice the provision for a third track in the construction of the catenary towers. Such farsighted planning eventually means great economies, especially in a world of rising costs.

Giant gauge.

According to the Berlin correspondent of the *Svenska Dagbladet*, German railway technicians are preparing a vast project for post-war railway development. Under consideration for rapid passenger and freight traffic are long-distance railways with a gauge of over 12 feet, which would greatly increase the capacity of freight clearances. Interesting in this light is the fact that United States clearance limits for freight are larger than any now used in Europe.

Will we again have a battle of the gauges?

Station disappeared.

R. M. Ritchie, 1010 Pine St., St. Louis, Mo., tells the story about a well known railroad in eastern Ohio which, in order to get right of way through a certain township, promised the town fathers that it would build a station in that township. The franchise was granted and the station was built, but a short time later it disappeared. The railroad had moved it overnight to a more lucrative stand, and since there was no provision in the agreement that the station must be kept where it was built, the town fathers could do nothing to force its return!

Bill Moore's Trip: III

★ From Seattle to Detroit by rail, then on to Buffalo by lake boat, completing 10,000 miles of travel.

By William C. Moore.

FRESH from our trip to Alaska and the narrow-gauge White Pass & Yukon [last month's TRAINS], we were all primed for a sample of heavy transcontinental United States railroading. We got our sample in good measure—at Seattle, where the three northern routes terminate, down the West Coast on the busy SP, and across the country on the UP, C&NW, and Michigan Central. Trains, trains, trains! We traveled right in the thick of the West's heaviest traffic.

The Union and King Street stations in Seattle have separate street entrances a block apart and are separate entities, but adjoin beneath the street level, divided only by a fence. Following a Pullman conductor, we found the employees' gate we knew must be there. At 9:45 p. m. the Northern Pacific's *North Coast Limited* left King Street Station for a short run south before heading eastward. At 10:15, the Great Northern's *Empire Builder* left in the opposite direction before it, too, turned eastward. At 10:30, from next-door Union Station, the Milwaukee's *Olympian*, behind two giant electrics, glided smoothly south from the station yard, heading toward Chicago as the third member of this highly competitive 2200-mile run.

There is something extremely thrilling about an evening departure of a limited train. Lounge and observation cars are gayly lighted. Bedrooms and berths are made up, but a friendly light shines out here and there. Smiling porters stand at the steps to their cars. Departing passengers are looking forward to a good night's sleep. Friends who bid "Good-bye" are in a holiday mood. Then comes "All aboard" and the long train slips slowly out of the station, through the yards, and is soon only a spot of rear-end lights, two reds and the train's special shield, brilliantly lighted. On the evening we watched these departures from Seattle, the *Empire Builder* had 16 cars and the *Olympian* had 17 in the famous yellow of the Milwaukee.

Our own train was the pool train to Portland. This is a joint UP-GN-NP overnight run which each of the participating lines operates for a year. We had a Great Northern engine and crew. The overnight trip to Portland was unhurried.

The Union Station at Portland is similar to many others in large cities throughout the country—cities big enough to have a heavy overnight traffic but with little or no commuter and local travel. There is a peak two hours in the morning when sleeper jobs are arriving, then a great quiet all through the day, with another peak in mid-evening when Pullman trains are departing. Portland has the combined eastbound connections for the *Empire Builder* and *North Coast Limited*, which go out on the jointly owned SP&S, and the UP has its line to the east up the Columbia gorge. To the south it is all SP. The *Cascade*, out of Portland at 5:20 p. m., is the fastest train to Frisco and carries the best equipment, but leaves too early to permit the all-day motor trip along the Columbia River and to Mount Hood, so the *Oregonian* was our choice.

The difference between a single and double track was strikingly brought out on the Portland-San Francisco trip: 55,000 troops, bound for maneuvers, were moving north by rail from southern California points. We were to meet 17 extra troop trains in the next 22 hours, and our train had the questionable distinction of taking practically every siding in the 725 miles between the two Pacific Coast cities. Two hours late, we were in Klamath Falls well after daybreak, and it was possible for us to get some good camera shots of large SP power, with many cab-first engines in view.

Klamath Falls is quite the railroad center. Not only is it an important point on the Cascade line of the SP, but the Great Northern's

F. T. Richardson, 1634 E. 53rd St., Chicago, Ill.

The *Mercury* on Illinois Central tracks at Chicago.

California connection, put through about 15 years ago, comes in on SP tracks from the north before veering off southeastward to a Western Pacific junction at Bieber. The Oregon, California & Eastern is also important, bringing in many a train of logging cars. The SP has a secondary main line to the southeast which ties in with the Overland Route at Fernley, Nev. All in all, Klamath Falls is very much a railroad town—an excellent place for a stopover.

The daylight ride south from Klamath Falls gave us ample opportunity to become acquainted with the southern portion of the Cascade Route. Mount Shasta was in view practically all morning, and pictures of it could be snapped from the north, the west and the south. It was interesting to note long passing sidings being lengthened, and we gained the impression that a few miles of extra track could connect the sidings into a complete double-track line.

The major line-change of the year is between Dunsmuir and Redding, where the federal government is footing the bill for relocating 30 miles of SP main line so that it will be above the level of the lake to be created by the huge Shasta Dam. From the old line, which was still used at that time, we saw the new line branch off, and several times again we saw it above us as it cut across country at a high level for a sweep around the area to be inundated by the new lake. The steel and concrete bridges were all in place, and, where the line could be seen, the grading and track work were done. [The new line is now open.—*Ed.*] At the dam site, a new tunnel through solid rock had been built and the old SP line diverted through the tunnel while the main dam was thrown across the Sacramento Canyon. On completion of the dam the railroad tunnel became a large water diversion tunnel. The old mainline trackage from Redding to the south side of the dam, 12 miles, was left as a branch to serve the power house.

Below Redding, the Sacramento Valley broadens out, farms are on all sides, and we saw our first palms. In flat country, rail lines also spread out. A track heads southeast to join the Overland Route at Roseville, at the base of the Sierra Mountains. Another line heads directly for the capital city of Sacramento, a route followed by the *West Coast* on its long run from Seattle and Portland to Los Angeles. But we kept to the west side of the valley, turning west on the Overland Route at Davis. Here the double track looked exceptionally welcome, as we were running over seven hours late because of the northbound troop trains.

The Bay district extends may miles eastward: Crockett, Richmond, Berkeley, and then Oakland—all built up with oil refineries, industries, suburban homes. Oakland is the western terminus for the Overland Route and southern terminus for the Shasta Route. The station there has not changed in years, and with its ferry slip connection, seems not unlike the CNJ and Erie ferry-rail terminals in Jersey City, 3000 miles away. The ferries are larger than those on the Hudson, and

the sail across the bay, even at 2 a.m., is a glorious ride. The boat passed directly under the San Francisco-Oakland Bridge, and near the island site of the 1939 and 1940 San Francisco World's Fair, looking most ghostlike in the moonlight.

On one of our days in San Francisco we tripped across the big bridge to Oakland and Berkeley to see the new equipment and smooth working of the Key System. This interurban line has some fast dispatching from its new downtown San Francisco terminal, where eight tracks quickly shrink to two, and from which some trains for different points run across the bridge as a unit, to fan out in various directions when they reach the east shore of the bay. From the bridge and connecting causeway we saw all the stored cars of the Interurban Electric, SP subsidiary, which ceased operation August 1, 1941. The Key System has almost all new cars, operating in two-car articulated units.

If one must give a definite rank to various trains, the No. 1 train of our entire journey—and probably of the whole country—is the new 17-car *Morning Daylight,* put in service in the Summer of 1941 between San Francisco and Los Angeles. [See January 1942 Trains.] For inside appointments, the Chicago-Detroit *Mercury* of the Michigan Central runs it a close second, but the striking outside coloring, the extreme length and smooth sweep of the *Daylight* make it a thrilling and impressive sight for young and old, railfan and blasé traveler.

Inside the *Daylight* is an air of refinement and comfort to the *n*th degree. Working forward from the glass-enclosed observation, with its photo murals and gorgeous appointments, are two more parlor cars, then an elaborate tavern-lounge car, in front of which are the many coaches, an articulated diner-kitchen unit, and then still more coaches, usually adding up to 17 before the latest 4-8-4 is reached at the front end.

We wasted no time in the stops at San Jose and Salinas, but the big 4-8-4 welcomed a front-end helper engine—a light Pacific—in order to make respectable time over the San Luis Mountains. This is a steady but steep climb through barren country above valleys in which grapes, pears, celery and truck farming are abundant. Six or seven short and medium-length tunnels cluster the summit. The downgrade toward San Luis Obispo is impressive. A double-headed freight was waiting for us on a mountain siding. Only by gigantic twists and turns does the line keep a grade within limits for northbound traffic. The SP's horseshoe curve permitted a clear view of the two engines 17 cars ahead—or should I say ahead, when they were traveling in the opposite direction from the observation and really not ahead at all! A timetable super-snooper could tell that the northbound *Morning Daylight* was approaching. Just north of San Luis Obispo, two streaks of orange and red passed one another, and for the split part of a second there were 34 streamlined, lightweight cars all in a row. The southbound train did not slacken speed, and the northbound also kept moving, so perfect was the timing of this meet on a line which is single all the way except for the usual passing sidings.

While the Los Angeles city limits do not quite begin in downtown San Francisco (as certain Southern Californians would have the world believe), the metropolitan area does start a long way out. The Coast Line tracks parallel streets and boulevards for some distance, then skip around the new channel and embankments for the Los Angeles River. This is all a good deal like the approach by rail to a dozen other American cities. When we saw tracks of the Santa Fe and Union Pacific joining the SP, we knew the new Los Angeles Union Station was at hand. This striking terminal, most recently completed of all large city stations, is truly handsome. Its Spanish architecture fits perfectly with the climate and surroundings. An outdoor waiting room or patio is unique and well patronized. The *Daylight* pulled in right on time to the minute.

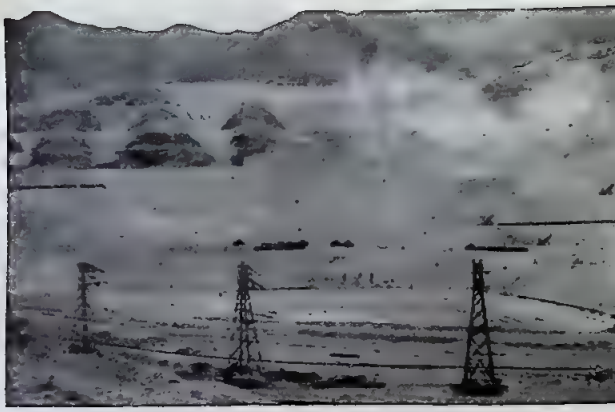
Leaving Los Angeles several days later, we selected the *Los Angeles Limited* of the reliable Union Pacific, an all-Pullman job. The eastbound *Challengers* operate as following sections of No. 8. These trains furnished a most interesting commentary on current travel. The *Los Angeles Limited* had nine cars, baggage, diner, observation-lounge and six Pullmans. The *Los Angeles Challenger* ran in two sections. The first had 14 cars, including a new two-unit articulated diner-kitchen combination and 12 tourist

sleepers. The second *Challenger* had 13 cars, two diners and 11 coaches, some of which were UP and some few C&NW, all especially painted for the *Challenger* service. All *Challenger* passenger cars, 23 of them in the two sections, were crowded, while the *Los Angeles Limited* was only moderately well filled.

The Los Angeles station for several evening hours was as much a "mad house" as is any terminal where many long-distance trains leave within a short space of time. In addition to the three UP trains mentioned above, the streamlined *City of Los Angeles* had pulled out at 6:30 p.m. The other UP trains were off at 8 p.m. The Santa Fe dispatched its *California Limited* eastward at 7:15. On Tuesdays and Fridays, the *Super-Chief* and *El Capitan,* both Diesel-powered, would have sailed, but it was a Sunday night when we left. However, at 8:15, the *Scout* was scheduled to be off. The SP had the busiest evening of all. Between 7 and 9 the *Coaster, Sunset Limited, Lark* and *Oakland Lark* all headed north, while the *Argonaut* left for the East on the Sunset Route, and, even more impressive, the *Golden State Limited* and the *Californian* headed for Chicago on the joint Sunset-Golden State Route of the SP and the Rock Island.

Service and cooking on the UP dining cars was excellent. After breakfast, the observation-lounge was the best spot from which to see the barren but impressive mountains of southern Nevada. My haircut was long overdue, so I took advantage of the barber shop in the forward end of the observation car. The roadbed was smooth, the curves well banked and the heavy car rode well, so that a good haircut was not hard to obtain. The barber was a valuable source of information in straightening out the "how" and "why" of some of the car routes. The timetable gives the impression that the same lounge car runs through from Los Angeles to Chicago, but in the still of the second night, it quietly drops off at Green River, Wyo., and goes back to Los Angeles because an identical car is picked up when the *Los Angeles Limited* is combined with the *San Francisco Overland Limited.*

We dropped off at Lund, Utah, very much in the middle of a flat, hot desert, in order to take the side trip to Zion, Bryce and Grand Canyon National Parks. While waiting for the bus connection to Cedar City we had a fine opportunity to see the two long *Challenger* sections pull in, take water, and then disappear as specks on the horizon as they headed north to Salt Lake City on a level, tangent track. Behind the *Challengers* came the most surprising train of all, No. 6, known as the *Fast Mail.* Made up of many express and baggage cars, with a combination car and one coach on the rear, all most noticeably un-airconditioned, this train then left Los Angeles at 10:30 p.m., two and one-half hours behind the *Los Angeles Limited,* beat it out of Ogden headed east, and was in Omaha two hours and 20 minutes ahead, almost five hours faster than the next best standard train on this run. Now it does not carry passengers west of Ogden. The few people riding No. 6 were on passes or were company employees.



William C. Moore, courtesy Railroad Photographic Club.

Copper mine at Bingham, Utah.

While taking a motor trip to the copper mines in Bingham Canyon, we caught glimpses of the Denver & Rio Grande Western, the Western Pacific, the Bamberger Railroad to Ogden, the Salt Lake & Utah south to Provo, the Salt Lake, Garfield & Western, a 15-mile electric line to the shore of Great Salt Lake, and the interesting Bingham & Garfield. This last line connects the huge Utah Consolidated copper mines with the smelters and refineries at Garfield, 20 miles north. There is now no passenger service. Ore trains are pulled by slow-moving Mallet articulateds. Southbound, the engines are run backward on an easy upgrade because all the cars are empties. The line twists and winds into the heart of Bing-

ham Canyon to make connections with assembly yards to which electric locomotives convey the ore cars from 18 different levels in the mile-wide open-cut mines.

Just before leaving on the eastward *Pony Express,* we lost a chance to photograph the westbound *City of Los Angeles* because that noble flash of yellow ran late and conflicted with our departure time. It was, however, impressive to see such a transcontinental train pull into a major city and leave within two minutes, or just time enough to handle passengers.

At Ogden eastbound trains from Salt Lake City run onto the main Overland Route east of the city and then back into the station. The *Pony Express* had left Salt Lake City late and so did not clear Ogden in advance of the evening rush as scheduled. We never did keep straight all the innumerable trains in the Ogden yards and station. There were two long sections of the *Los Angeles Challenger,* two sections of the *San Francisco Challenger,* the *Los Angeles Limited* about to be combined with the *San Francisco Overland Limited,* the *Fast Mail* just combining with one of the *San Francisco Challengers,* and an unidentified westbound train for good measure. It seemed like pioneer days on the prairies when the wagon trains all consolidated to go over the Wasatch Mountains together. These mountains are still formidable barriers in either direction, for it is this span from Ogden to Green River that caused the UP to purchase the largest, longest articulated single-expansion locomotives in the world, the new 4-8-8-4's in the 4000 series [photo in Dec. '41 TRAINS], each weighing over a million pounds (with tender).

In the shuffle of so many trains and extra sections the *Pony Express* lost out, as it was two hours late into Denver next morning. It is a fine train, with excellent equipment, its own special stationery, and makes a Kansas City-St. Louis connection at Denver. As it backed into the Denver Union Station, we had opportunity to see many types of yard goats and waiting passenger engines—Union Pacific, Rio Grande, Santa Fe, Burlington and its two affiliates, the Colorado & Southern and the Fort Worth & Denver City. A curious old UP gas car, M-19 [one of the McKeen cars], came up to the station. Allegedly built in 1906, its windows are all round like portholes and the front end comes to a point. The center door is set low, almost at platform level. It was still in daily local service. Forerunner of lightweight, streamlined, gas-powered equipment, it looked small and strange beside modern streamliners.

Midafternoon at Denver sees the takeoff of two fine competitors for the Chicago run,

Veteran of 1906.

Below is the UP McKeen car described in the text. At right, an Illinois Central double-header backs into Central Station, Chicago, to pick up its train. This photo was taken through double plate glass windows of the departing *Mercury.*

William C. Moore, courtesy Railroad Photographic Club, 47 Royal St., Allston, Mass.

the *City of Denver* on the UP-C&NW, and the Burlington's *Denver Zephyr*. Both Diesel-powered trains stand side by side and furnish an interesting contrast in design, construction and variety of decorating treatment. The former, on which we rode, pulled out at 3:55 p. m., and the *Zephyr* was off five minutes later. No time was wasted. Our compartment was in the observation car. One could soon hear the click of pebbles sucked up from the roadbed ballast. Looking out of the plate glass windows, the track and landscape seemed to slide away more rapidly than on any other train. This was correct, as the running time is fast across the Colorado and Nebraska plains. The diner in the center of the train rode better, but at dinner time one still knew that many miles were sliding by between fruit cup and after-dinner coffee. In the evening, it was fun to spend some time in the *Shack*, a tavern car up forward, lined with old wood and timbers and fitted up like a saloon of the good old rootin', tootin', shootin' 1870's. The bartender was appropriately garbed and some original UP handbills and maps on the walls added to the theatrical posters and early photos of long ago. It was a little sad to realize this was the last night on a sleeper for a time, as every overnight jump had been comfortable and enjoyable.

With just 47 minutes to go from the Northwestern Station to the Michigan Central Station in Chicago through streets filled with early morning traffic, we appreciated the arrival of the *City of Denver* four minutes ahead of time. It slipped in through the suburban towns and cities to the west just after the peak of commuter trains, with nary a red or yellow signal to retard its progress. The sharp sweep of the terminal tracks just before the platform sheds gave us a final and grand view of the entire train from the observation car. The Parmalee Transfer Company, a service nearly as old as the city itself, makes as rapid an interchange as possible of passengers and luggage from each terminal in Chicago to every other one in the downtown district.

William O. Moore, courtesy Railroad Photographic Club.

The new equipment of the Chicago-Detroit *Mercury* rivals the fine appointments of the *Daylights*. With every salable seat occupied, the popularity of the train speaks for itself. Most impressive of all is the diner, a full-length car unencumbered by the usual kitchen and corridor at one end. The kitchen facilities are in a separate car, thus permitting the seating of a third more persons than in the customary diner. At one end is a waiting room seating six persons, a noble gesture and adequate under normal conditions, but rather congested when 20 persons were waiting to dine. As the Michigan Central uses Illinois Central tracks for some distance out of Chicago, there was full opportunity to see one of the busiest commuter lines outside the New York area. Ten tracks lead through the South Side for several miles. Six are reserved for the multiple-unit electrics with their overhead pantographs and for the high-speed Chicago, South Shore & South Bend electric line, two handle the Illinois Central, Michigan Central and Big Four through passenger trains, all steam powered, and two are for freight.

Before taking the D&C Line boat from Detroit to Buffalo, there was time to stop at the Fort Street Station in Detroit, used by the Wabash, Pennsylvania, Pere Marquette, C&O and B&O. This station is far from new, seems small considering the importance of the lines that use it, and is in no way imposing, but in mid-afternoon it has a short period of glory and gaiety when three very fine trains are lined up side by side. The *Red Bird*, a joint Wabash-Pennsy Detroit-Chicago flyer, was a handsome sight, newly equipped. Its seven cars leave Detroit behind a Wabash Atlantic of 1910 vintage, with

large drivers which make her a fast stepper when the load is not too heavy. On the next track stood the *Ambassador* of the B&O with an enclosed lounge on the rear end. This train has been Diesel-powered since Fall, 1941, Detroit's only Diesel job. Next to it was the *Sportsman* of the C&O, ready to run over Pere Marquette rails as far as Toledo. It, too, had a diner-lounge against the stub-end bumper in the station. Finally, a light PM job for the Michigan resort country was considerably dressed up by a business car, No. 2, with its handsome, open observation end platform. The general superintendent was off for a Labor Day weekend.

The sailing from Detroit at dusk presented a pretty sight, the river alive with loaded ore boats headed south for Lake Erie ports, and empties hastening north to reload before the early Winter set in. Giant steel car ferries of the Wabash and Pere Marquette handled freight trains across the Detroit River in jig time. At Windsor, on the Canadian side, we had a brief glimpse of the CPR and CNR switchers. The river, after passing the mouth of the famed River Rouge and its great Ford plant, soon gave way to Lake Erie, and then there was only water until Buffalo was reached next morning. There the big lake boat tied up in the shadow of the Lackawanna Terminal.

On the entire trip there was not one missed connection, not a complication over reserved compartments, parlor car seats, staterooms or sidetrip arrangements. Dozens of different persons in train crews, engine crews, dining car service and Pullman service were engaged in conversation, were asked questions (all reasonably sensible, we hope), and were in a position to add or detract noticeably from the enjoyment of the trip. Not a single person was discourteous, abrupt or indifferent. A special palm goes to the Pullman porters for unobtrusive service, thoughtfulness and unfailing good humor.

Ten thousand miles is quite a stretch of traveling, but when one thinks of all the interesting lines *not* ridden upon, the national parks *not* seen, the many large cities *not* visited and the routes left for "another time," then it is almost time to start figuring the how and wherefore of that "another time."

Study in rear ends at Fort Street Union Station, Detroit.

At left is the Baltimore & Ohio Diesel streamliner *Ambassador*, terminated by a new-style Pullman. In the center is the Chesapeake & Ohio *Sportsman*, while at the right the general manager's private car brings up the rear of the Pere Marquette's *Night Express* to Chicago. Out of the picture to the left is the *Red Bird* of the Pennsylvania Railroad, also to Chicago.

William C. Moore, courtesy Railroad Photographic Club.

Latest in railroad war equipment.

The war has led to the construction of many bulky pieces of equipment, most of which must be transported on railroad cars. To check the clearances of its tunnels and bridges, the New York Central System constructed the above "porcupine" car. The 112 feelers, made of oak, swivel backward and hold their deflected position for measurement. Measurement of top clearances is performed by a steel pantograph which is connected to a smaller one within the car, which records the readings. The car is now in operation on the Boston & Albany Division of the New York Central System.

The Boomer

★ Itinerant railroader got his name by following booms; will he return during war prosperity?

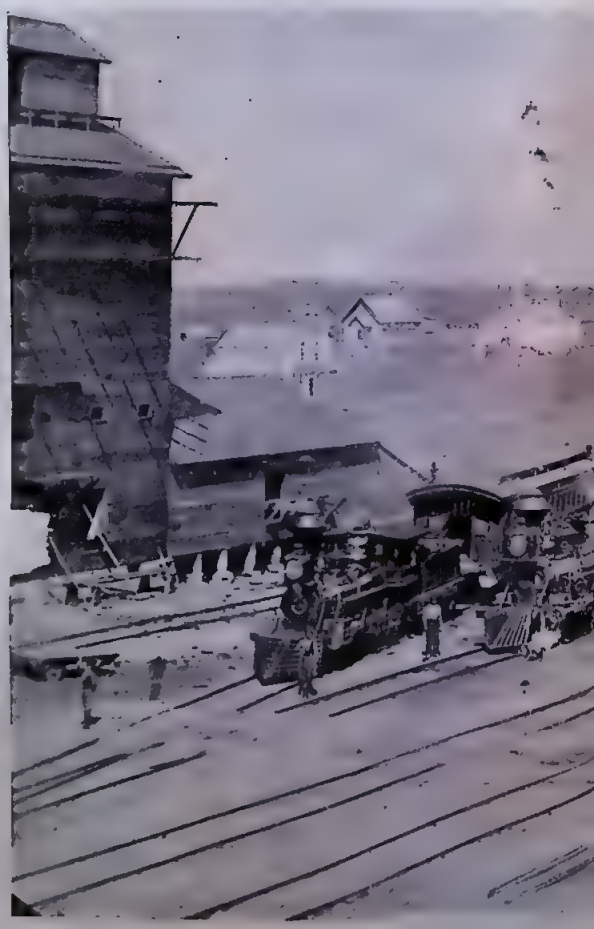
By W. T. Coniff.

An old, familiar figure is missing from the contemporary railroad scene. Carloadings increase week by week and there are a stir and a bustle about the freight yards and roundhouses that have long been absent. Engines are being taken out of the white lead and put under steam after standing for years in serried rows, with cold fireboxes and covered stacks, like huddled, muffled derelicts in a bread line. The long-dormant railroad industry is in the midst of a vigorous revival; but the boomer, the roistering rover of the rails, with his thousand-mile shirt, picturesque vocabulary and the air of easy familiarity with the far places, has virtually vanished from America's railroads.

The wild days and the wild ways of the nomadic railroaders are forever gone. Since the stock market debacle of 1929 ushered in a period of prolonged depression, the boomer has fast faded out of the transportation picture and the home guard has come into his own. Here and there, a few grizzled veterans of the lost legions of wanderers hang grimly to the lower reaches of the extra boards, starting again from scratch with the fresh-faced youngsters who have a high school diploma instead of a stack of well creased service letters from a dozen or more railroads scattered across half the Western Hemisphere, the kudos of the hard school of experience, the master's degree of the arbiters of the iron trail.

It was the great American Railway Union strike of 1894 which really marked the beginning of the boomer era. There were always wanderers on the American railroads, but until then they had been few in number, a handful of men taking advantage of the premium placed on their skill and experience by the feverish expansion of the railroads that followed the close of the Civil War. The A. R. U., under the leadership of Eugene V. Debs, destined to be the stormy petrel of American politics for many years, sought to bring all railroad employees within one organization. Its increasing strength, as thousands upon thousands of members of the Big Four (Brotherhood of Locomotive Engineers, Order of Railway Conductors, Brotherhood of Locomotive Firemen, and Brotherhood of Railroad Brakemen), the shop crafts and maintenance organizations enrolled, had railroad management jittery.

The Pullman strike was in progress when



Early boomer days at Austin, Minn.: June, 1874.

The photo below shows the station at Austin, Minn., in the days when railroads were young. On the main track in front of the station is Chicago, Milwaukee & St. Paul train No. 2, with Engine 9 at the head. On the rear end is Engine 120. Near the end of the platform is Burlington, Cedar Rapids & Northern engine No. 24. Next to No. 24 is No. 180, standing at the rear of a two-car train attached to Engine 43. James Thompson, who drove No. 43 when this photo was taken, died in April, 1887, two months after his last run on the Austin-Mason City line. He was an engineer for more than 36 years; over half of this period was spent on Ohio roads before he settled down to continuous running on the CM&StP in Minnesota and Iowa. Austin today has a population of more than 18,000 and is served by the Milwaukee Road and the Chicago Great Western.

the A. R. U. met in convention in 1894. Despite the opposition of Debs, a resolution was adopted that members of the big union would not haul nor handle cars of the Pullman Company. The more conservative leadership of the Big Four held aloof from the controversy while the strike spread like wildfire across the country. It was much like the Outlaw Strike of 1920. Unauthorized and in violation of agreements in effect on many roads, it was paralyzing at some points and ineffective at others. Federal troops were called into Chicago when it was alleged that strikers had interfered with the handling of United States mail. Railroad management decided to deal drastically with the one-big-union movement by barring its members from further railroad employment.

Countless thousands of transportation employees, engineers, conductors, firemen and brakemen, whose skill and experience were of little value in other industries, were banished from the rails by this edict. Their only recourse, if they wished to continue in

TRAINS collection.

Drawing by Alain Madle'.

railroad service, was to cloak their identity "under flag," assume a fictitious name, and seek employment in regions remote from their former homes. The weak-willed and the timid abandoned the fight and entered other fields of endeavor; but the resolute, the restless and the adventurous met the challenge by quickly adapting themselves to changed conditions. They formed the vanguard of the army of boomers, the Foreign Legion of our transportation system that was to last until the collapse of 1929 rang down the curtain on the roving "rails."

The freight traffic pattern of our country coalesced during the last decade of the Nineteenth Century. The densely populated industrial areas of the Northeast and the great cities of the Atlantic Seaboard began to draw their raw materials and foodstuffs from an ever-increasing distance, as their needs outstripped local production. The mines and fields of the more remote regions were joined by swift, sure transport to the industries and the markets of the world. Flowing in a never-ending stream, the raw products of farm and forest and mine met the westward current of processed and manufactured materials, even as they do today. Development and perfection of the refrigerator car brought the fruits and vegetables of California and Florida within easy reach of Eastern markets and changed agriculture from a local enterprise in these regions to a national industry. It also created the seasonal "rushes" that have since remained one of the major operating problems of many carriers.

Without any semblance of organization, the peripatetic "rails" who wandered the quarter-of-a-million-mile network of American railroads proved ideally adapted to meet this particular need. Forming a reservoir of trained personnel, available anywhere at any time, the boomers followed the "rushes" from border to border and coast to coast. Northward they went in the early Spring to move the ripening peaches of Arkansas. Summer would find the boomers spotting cars at grain elevators in the searing heat of the Kansas sun. Later they would turn westward to Colorado or Wyoming to meet the green fruit rush pouring over the Rockies from the fertile valleys of California. Solid 80-car "fruit blocks" tailed the bellowing Mallets up the torturous trail to the crest of the continent at the top of the Continental Divide. To the south, the brief but hectic sugar rush in Louisiana engaged a few of the boomers, while others hurried to their Winter jobs on the Florida roads, whose period of heaviest traffic began with the influx of visitors from the North.

South of the border, the rapidly expanding railroads of Mexico and other Latin-American countries were largely manned by American railroaders for many years. These adventurous spirits, the famous Gringo "rails," have added the word "highball" to the rich and colorful Spanish language of the Western Hemisphere.

Ex-everything and ex-everywhere would best describe the men who found, in the restless, wandering life of the boomer, the color and variety and constant change without which life loses its savor for the nomad. There were ex-convicts and ex-ministers and ex-almost every other occupation among the wanderers, and the man that you met in one place might have another name when you saw him again. Courtesy always demanded that a member of the wandering fraternity refrain from addressing any acquaintance until he learned whether he was "under flag" or using his own name.

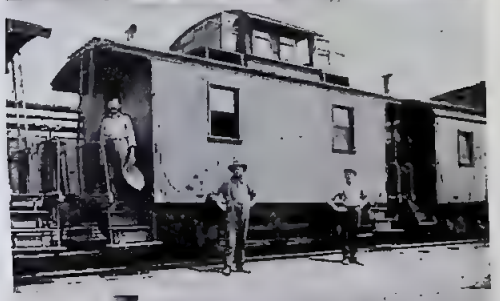
Membership in one of the Big Four (tantamount to transportation on most of the railroads not so many years ago), the ability to endure anything except prosperity, and a robust constitution were essential to the boomer. It was almost always possible to get someone to pass a physical examination for a worthy brother, but it was impossible to get someone to do a man's work in the yard or on the road, and make no mistake about it, boomers were hired to work.

There was none of the good-neighbor policy for the newcomer. Errors and omissions by the local talent were expected, but the boomer was supposed to know, and local offi-

cials took delight in any opportunity to hold up to public scorn some bonehead play by the supposed-to-be master of the craft. There was little love lost between the home guards and members of the traveling fraternity. The brass hats regarded the employment of boomers as a necessary evil and piously resigned themselves to the inevitable as the period of intense traffic drew near and ruddy-faced, thick-shouldered men began arriving by freight and passenger train and by diverse and devious routes.

It was not the sort of life that would appeal to the staid and conservative, and their diligent search for work was generally dictated by the stern necessity of fending off the pangs of hunger. The worst jobs were always reserved for the wanderers. The sun-blistered desert division points, where the blistering heat would flay a horned toad, the bleak, windswept mountain towns, cold as Little America, knew when the wandering "rails" began to assemble that they were in for a six-week or two-month siege of heavy traffic and at least three uproarious paydays. Year in and year out the program never varied, and men grew old and gray on the endless round of the boomer trail, only to dye their hair and take a new lease on life by changing their route and hitting other roads and different division points.

Strangely enough, the boomer in his cups would boast of the long years he had spent as a home guard, while the garrulous homesteader, who had never been more than two division points away from home in his life, would relate tales of his far-flung wandering that would put Marco Polo to shame. Beware of the garrulous boomer. Like the survivors



Bottom, W. K. Aughenbaugh collection; others, TRAINS collection.

Boomer days.

Top, a Chicago, Indiana & Eastern crew (not necessarily boomers) poses with an engine. With the caboose are crew members of the Toledo, St. Louis & Western. Lower, engine and crew of the Cincinnati, Lebanon & Northern. The action picture was taken on the Baltimore & Ohio (O&LK) near Parkersburg, W. Va., in the nineties.

Collection of W. K. Aughenbaugh, 3564 Harrow Ave., Cincinnati, O.

of Custer's Massacre, there are none. If there is anything that a man learned on the hard and torturous road that led to nowhere, it was to keep his mouth shut. The saloon swampers and the flophouse thieves who posed as boomers switched most of their cars across a mahogany bar, and even a casual audit of the years that they claimed to have spent on various roads would often bring their age well above the century mark.

The elite of the wandering fraternity, the boomer engineers and conductors, sought work on those roads were nonpromotable firemen and trainmen were employed. Many Southern roads, where Negro firemen and brakemen are employed, promote only white employees to the higher positions, in proportion to their experience and to the number of men hired in the higher classification. During the decade after the turn of the century, engineers and conductors had little difficulty in finding employment, and the Isthmian Canal Commission employed hundreds during the construction of the Panama Canal. Later, many of these men, imbued with the wanderlust, went to the fever-ridden swamps of the upper Amazon, where the Madeira-Mamore was building at the cost of thousands of lives. Others headed northward to the government railroad in Alaska, where much of the equipment that had been used in Panama was sent.

Today only a few carriers, such as the Florida East Coast and the Gulf & Ship Island, hire new engineers. Most roads prefer to promote their own employees to these positions, but on many Western roads "percentage" agreements are in effect and three conductors are hired for each 17 of the road's own trainmen promoted. The famous 85-15 ratio which is embodied in the Railroad Labor Act is thus embalmed in various agreements and rendered immortal by the lurid curses of frustrated home guards who see in it only a threat to their hopes of promotion.

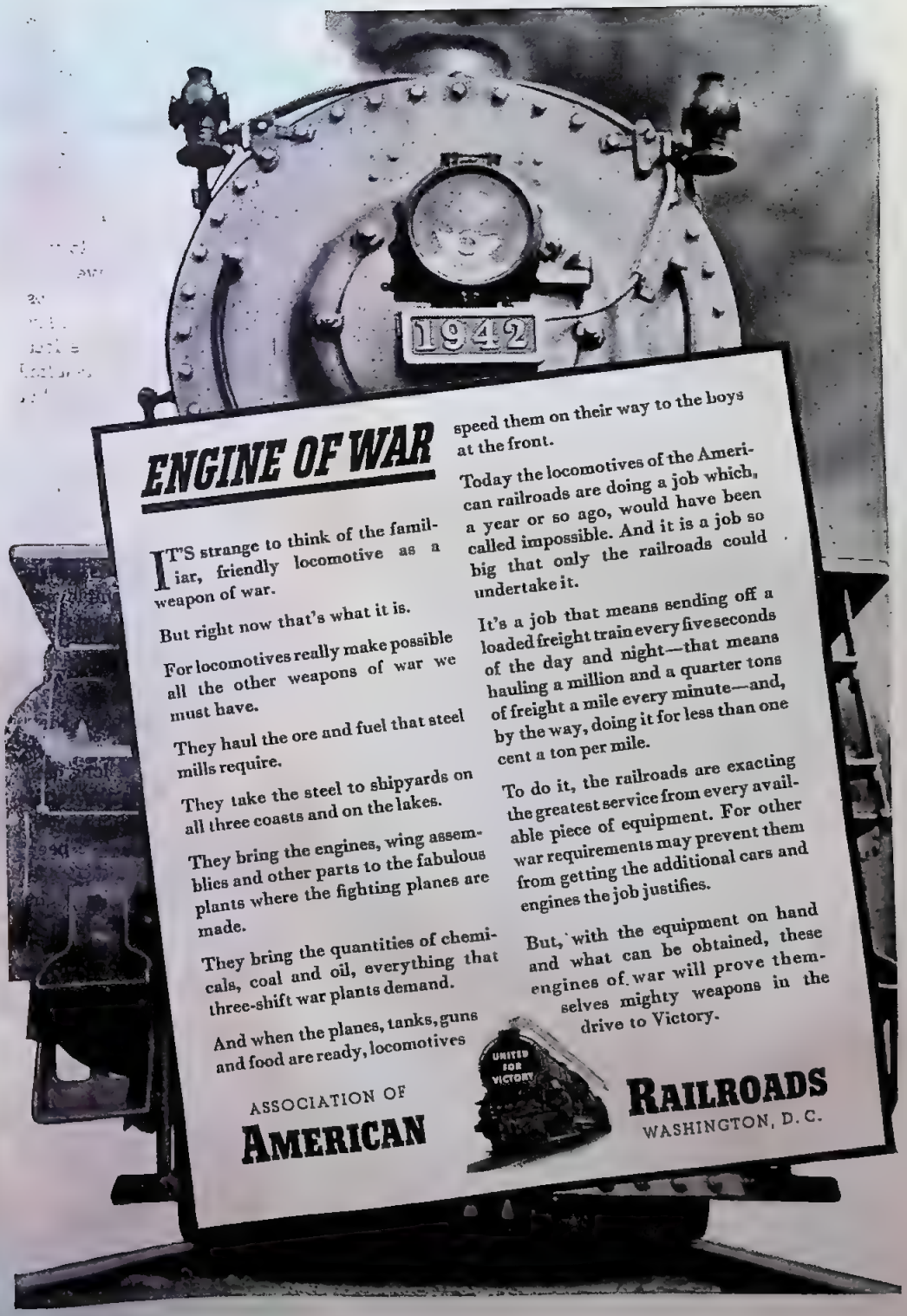
The railroads owe much to the boomers and the boomers owe much to everybody. I recall one Western road where I was employed during the hectic days of an oil rush. The trainmaster had investigated and found that many of the men did not have standard watches, if any, as required by the rules. Some 17 of the boys were rounded up and forced to purchase watches on a "sign-up" or deferred-payment plan. By sundown more than half of the watches had been pawned; their erstwhile owners had spent the proceeds on prohibition booze and quit their jobs, leaving the railroad holding the bag.

Painful incidents such as this were of frequent occurrence in railroad towns where boomers were hired, and they left deep and painful scars on the memories of the populace. It was as easy for a boomer to obtain credit (outside of the company's restaurant, where employees could sign up for a pie card or meal ticket) as it would be to walk to Cuba. If a boomer could survive those first lean weeks, then the pitfalls of prosperity crowded thick upon him after his first payday. Diligent research work in the local rye and bourbon emporiums often resulted in making that also his last payday in that particular terminal.

The prolonged depression effected a lasting change in the transportation system of our country. Less traffic, larger locomotives, longer, heavier freight trains, hauled at what was passenger-train speed only a few years ago, have within a space of 20 years nearly halved the number of railroad employees. Haphazard employment methods that permitted some divisions to furlough employees while other parts of a system were hiring new men, have all but disappeared. Railroads today make every effort to place their furloughed employees at some other point on the system, realizing that it is a long and expensive process to train men in the intricate operations of modern railroading.

The self-appointed savants who have been proclaiming the end of the nomadic railroaders for the past 40 years may be right this time. Each of them, like the French king who said, "After me, the deluge," is firmly convinced that the boomer era ended with his retirement from railroad service, and some of them retired soon after the diamond stack became obsolete.

After each panic or depression, one of the first signs of recovery has been the proclamation that there would be no more boomers. Time after time the wandering rails have been solemnly interred only to reappear as railroad traffic reached new peaks. There never has been a boom without boomers. We are well started on another boom, and perhaps these sturdy old ghosts will again roam the rail, for good boomers never die.



ENGINE OF WAR

IT'S strange to think of the familiar, friendly locomotive as a weapon of war.

But right now that's what it is.

For locomotives really make possible all the other weapons of war we must have.

They haul the ore and fuel that steel mills require.

They take the steel to shipyards on all three coasts and on the lakes.

They bring the engines, wing assemblies and other parts to the fabulous plants where the fighting planes are made.

They bring the quantities of chemicals, coal and oil, everything that three-shift war plants demand.

And when the planes, tanks, guns and food are ready, locomotives speed them on their way to the boys at the front.

Today the locomotives of the American railroads are doing a job which, a year or so ago, would have been called impossible. And it is a job so big that only the railroads could undertake it.

It's a job that means sending off a loaded freight train every five seconds of the day and night—that means hauling a million and a quarter tons of freight a mile every minute—and, by the way, doing it for less than one cent a ton per mile.

To do it, the railroads are exacting the greatest service from every available piece of equipment. For other war requirements may prevent them from getting the additional cars and engines the job justifies.

But, with the equipment on hand and what can be obtained, these engines of war will prove themselves mighty weapons in the drive to Victory.

UNITED FOR VICTORY

ASSOCIATION OF **AMERICAN RAILROADS**
WASHINGTON, D. C.

Letters

★ Interesting sidelights on railroads as readers observe them.

Old-Time Loco, Coach Truck.

RECENT reference in TRAINS to the Norwich & Worcester Railroad reminded me of the enclosed photograph of NYH&H No. 474 with an old N&W coach truck in the foreground. You will observe that the road's initials and the date, 1879, are cast on the pedestals and that N&W is on the journal-box lids.

The engine herself is of some interest, having been built by Rogers in 1881 for the

Housatonic Railroad with 18" x 22" cylinders, 66" drivers, and weight of 82,000 pounds. She was No. 24 of that road, renumbered 474 by the New Haven, and classified C-20.

Like many New Haven engines of years ago, she did not have running boards and hand rails along the boiler.

Rogers engines were very popular in Connecticut, for, although built in Paterson, N. J., the founder of the works was a native of the Nutmeg State. *Arthur Curran.*

16 Ballard St., Newton Center, Mass.

Many Thanks.

ENCLOSED is a map of the Philadelphia Transportation Company city and suburban lines. I thought it might be of value or interest to TRAINS. This is the latest map printed of the Philadelphia transit system.

Fred A. Winkler.

87 E. Slocum St., Philadelphia, Pa.

[The map, Mr. Winkler, most certainly is of value for future reference. We thank you for your thoughtfulness. TRAINS' staff is most appreciative of contributors who send in railroad maps or any maps showing railroad and city streetcar lines.—*Ed.*]

"The 6:57."

YOUR reprint a few months ago of the article appearing in the *Christian Science Monitor*, entitled "The 6:57," by F. Wendroth Saunders, may cause some of your readers to wonder to what railroad and to what station he refers. To those of us who are familiar with the Boston & Maine, the description fits one particular station perfectly. That one station is Wayland, on the Central Massachusetts Branch of the B&M, 16 miles from Boston.

I enclose a photograph of the Wayland station and one of the Atlantic-type engines, such as shown in Mr. Saunders' block print, which are used to haul passenger trains on this branch. *Nathaniel G. Wetherbee.*

105 Washington St., Braintree, Mass.

[Wayland is right, says Mr. Saunders.—*Ed.*]

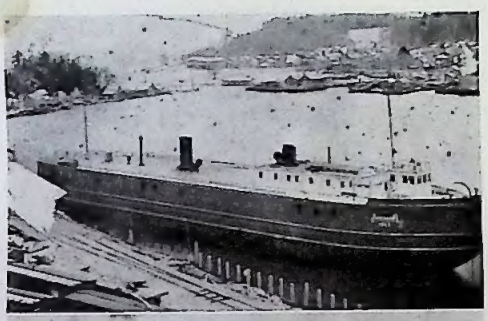
Nathaniel G. Wetherbee, 105 Washington St., Braintree, Mass.

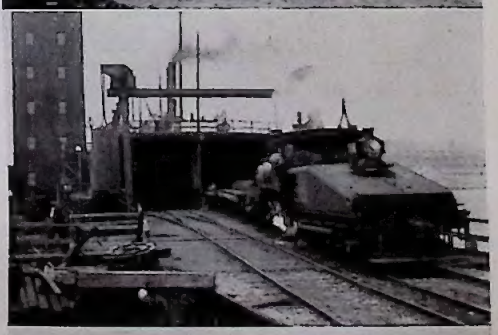
Car Ferries.

ANENT the car ferries story in September TRAINS, here are five photos of Ann Arbor boats from 1892 until the present. They are [top to bottom]: No. 1 discharging cargo at Frankfort, Mich., in 1892; No. 1 entering Frankfort harbor in February, 1893; No. 3, the first all-steel car ferry to cross Lake Michigan, making its maiden trip in 1898; loading a ferry at Frankfort in 1902; and No. 7, a modern boat now in service.

R. A. Messmore.

Assistant General Manager,
Ann Arbor Railroad Co., St. Louis, Mo.





Courtesy Ann Arbor Railroad.

D&RGW Snow Pictures.

IF ANY of your readers are interested in buying snow pictures of D&RGW narrow-gauge rotary plows in action, they can be obtained from Werner Photo Studio, 622 Eighth Street, Alamosa, Colo. They were taken by an engineer, on postcard size film, and I highly recommend them. They're low in price, too.

Bruce Triplett.

129 Marvin Ave., Akron, O.

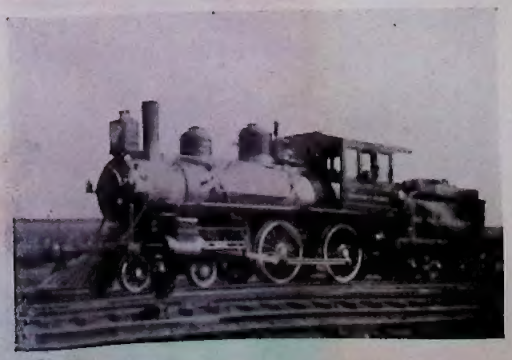
Another *Philip T. Nixon.*

IN VIEWING the prize-winning photos of the Railroadians of America rail-photo salon [August TRAINS], I noticed the picture of Susquehanna 25, 4-6-0, named *Philip T. Nixon.*

I am enclosing a copy print of another *Philip T. Nixon,* also a Susquehanna engine [see cut, below]. Her number was 23 and she was a 4-4-0. The original print has been misplaced, so I am not aware of the photographer's name nor of any other data.

J. Lawrence Dixon.

5132 Locust St., Philadelphia, Pa.



The Month

★ Passenger-mile figures show large gain; best May in 22 years.

★ For the first time in 22 years passenger-mile curves have crossed. *Railway Age* for September 5 reported some remarkable facts about travel by rail for the month of May, this year, as against May, 1920. The railways have much fewer passenger locomotives than in 1920, and they and the Pullman Company had about 41,600 passenger-carrying cars in 1920 as compared with about 28,000 at present. This year's passengers include troops on duty and furlough, as well as civilians. The average distance each traveled increased from 36.8 miles in 1920 to 73.6 in 1942. Average cars per passenger train were 6.4 in 1920 and 9 in 1942. Average passengers per car in 1920 were 19.61, and in 1942 were 22.5. Service rendered per passenger-carrying car in 1920 was equivalent to carrying 2916 passengers one mile *daily*; in 1942, to carrying 4400 passengers one mile daily—an increase of 51 per cent.

Figures show that, with every seat occupied, the roads could handle three times last May's traffic with their coaches and combination coaches. But it is pointed out that travel fluctuates so widely that it is wholly impossible to utilize total *potential* capacity. Shortages of capacity have developed in some places when large surpluses have existed elsewhere, and this will continue. But it can be said with certainty that the railways' and Pullman Company's record in handling passengers during the last Spring and Summer far exceeded every past experience and reasonable expectation.

★ The War Production Board has just authorized construction of 50 steam and 45 Diesel-electric locomotives during the first quarter of next year. A proposed program has been placed before the board, calling for 900 locomotives which are estimated as being necessary to handle the expected traffic volume for 1943.

★ Passenger traffic in Grand Central Terminal has become so heavy recently that the New York Central has found it necessary to install a temporary 10-window ticket office on the main concourse, between the information booth and the Vanderbilt Avenue stairway. This was opened August 28 for sale of coach tickets only, to relieve pressure at the regular windows. In each eight-hour shift three of the windows are "manned" by girl ticket-sellers recently hired by the NYC to replace men taken into the armed services. The girls, who are assisted by experienced male ticket agents, have received intensive training, including work at the suburban ticket windows in the lower level. Each was carefully selected for personality, education, and experience in meeting the traveling public.

★ In recent months orders for P. C. C. cars totaling 330 units have been placed for use in Pittsburgh, Washington, Los Angeles, and Boston. When these cars are delivered it will swell the P. C. C. roster in Pittsburgh to 501 cars of this type, an indication of what is likely to follow in other cities.

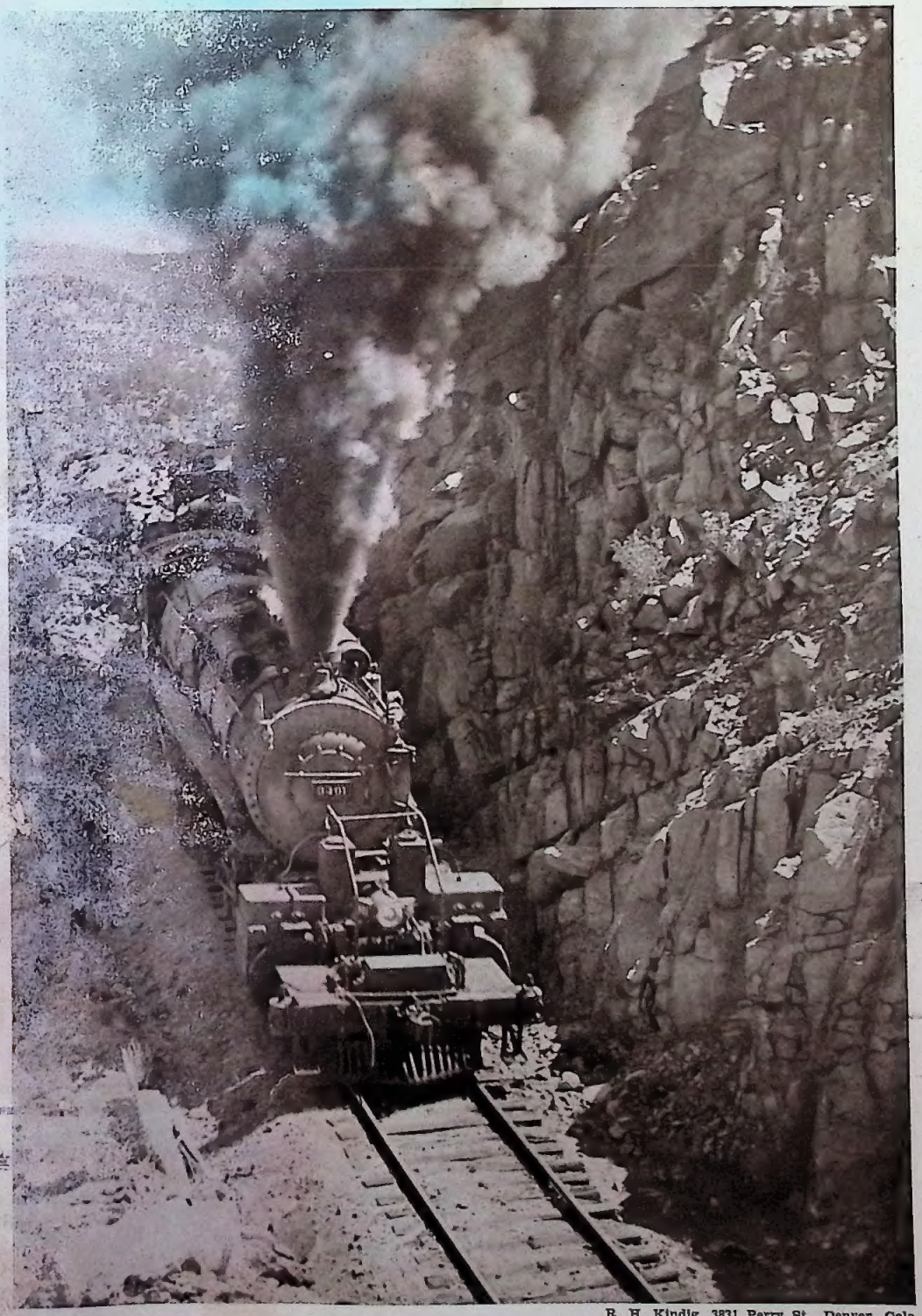
★ Clinchfield Railroad, traveling 277.3 miles through five states, has added seven "last word" cabooses. Expressly designed for the comfort of train crews, the new cabooses are to old-style cabooses what the P. C. C. car is to the old wooden streetcar. Extra-wide end platforms, plus other safety features, refrigerators, steel awnings for the cupola windows, Insulite insulation, and [illegible] living quarters combine to make these new "crummies" anything but that. Color scheme: bright red enamel for ends and sides with white stenciled lettering. Roof and trucks are painted black. Inside, the floor is slate color; walls, ceilings and fittings are enameled silver-gray.

★ The Transportation Corps, a new formation of the army, designed to take over the duties of the former Transportation Service, is headed by Major General Gross. The President recently nominated him to the rank of major-general and in a radio address the army's No. 1 transport chief expressed his high opinion regarding the fine job the railroads have been doing in the war.

★ An outstanding example of efficiency is shown by the use of C. T. C. over 92 miles of the L. & N. trackage between Brentwood, Tenn., and North Athens, Ala. This is a single-track main line over a rolling countryside. Figures just released on results obtained before and after C. T. C. was installed show that the cost of the installation is a minor factor when compared with increased efficiency in operation. For example, about 15 trains a day operated over the route before the war. This number was jumped to between 25 and 30 in 1941, and these trains, unevenly spaced, were in some cases being delayed as much as three hours for meets. Now about 35 trains are operating daily, delays have been cut to a minimum, and there are only 11 passing tracks where there were 19 before.

No coach-seat rationing.

On September 3, Joseph B. Eastman of the O. D. T. assured the public by radio that there would be no rationing of coach seats. It is quite possible, according to Mr. Eastman, that Pullman reservations primarily may be rationed to those whose travels are necessary for the conducting of the war.

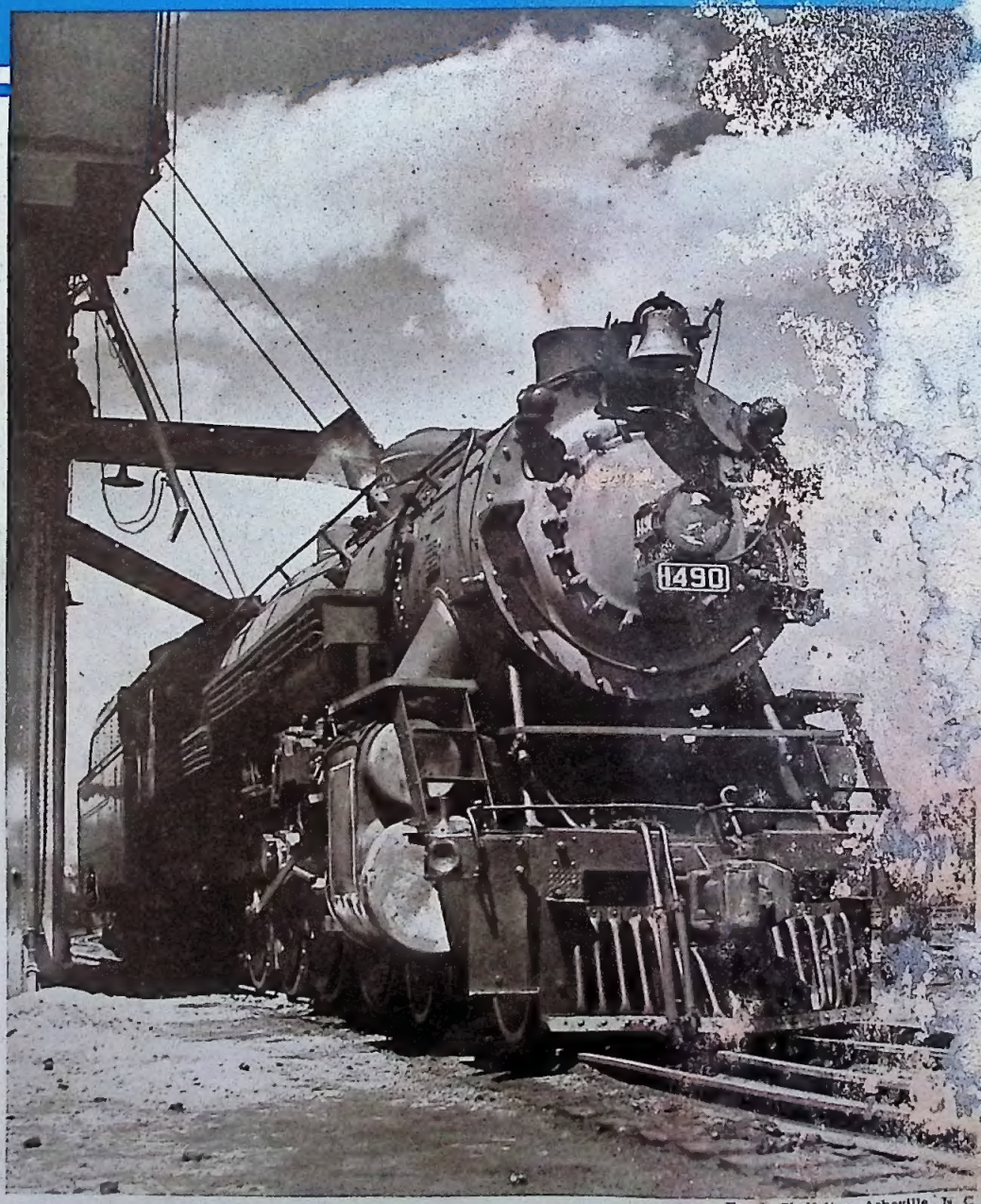


R. H. Kindig, 3831 Perry St., Denver, Colo.

Mallet on the Moffat. The huge front cylinders mark this Denver & Rio Grande Western locomotive as a true Mallet, or compound articulated. It is climbing to the Moffat Tunnel on the Denver & Salt Lake.

Trains

A Southern Railway Mountain-type passenger engine coals up (below) in the Asheville, N. C., yards. See also front cover



Frank Clodfelter, Asheville, N. C.